

CITATION REPORT

List of articles citing

SegNet: A Deep Convolutional Encoder-Decoder Architecture for Image Segmentation

DOI: 10.1109/tpami.2016.2644615

IEEE Transactions on Pattern Analysis and Machine Intelligence, 2017, 39, 2481-2495.

Source: <https://exaly.com/paper-pdf/66754257/citation-report.pdf>

Version: 2024-04-27

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
2189	Automated Segmentation of Hyperintense Regions in FLAIR MRI Using Deep Learning. 2016 , 2, 334-340		40
2188	Computer aided analysis of prostate histopathology images to support a refined Gleason grading system. 2017 , 10133,		9
2187	Automatic Segmentation of Kidneys using Deep Learning for Total Kidney Volume Quantification in Autosomal Dominant Polycystic Kidney Disease. 2017 , 7, 2049		72
2186	Surface Water Mapping by Deep Learning. 2017 , 10, 4909-4918		108
2185	Joint Learning from Earth Observation and OpenStreetMap Data to Get Faster Better Semantic Maps. 2017 ,		36
2184	Detection and Localization of Image Forgeries Using Resampling Features and Deep Learning. 2017 ,		55
2183	Automated segmentation of the choroid in EDI-OCT images with retinal pathology using convolution neural networks. 2017 , 10554, 177-184		20
2182	Embedded Robust Visual Obstacle Detection on Autonomous Lawn Mowers. 2017 ,		4
2181	Traffic scene segmentation based on boosting over multimodal low, intermediate and high order multi-range channel features. 2017 ,		2
2180	. 2017 , 1-1		58
2179	Objectness Region Enhancement Networks for Scene Parsing. 2017 , 32, 683-700		1
2178	Deep Learning of Atomically Resolved Scanning Transmission Electron Microscopy Images: Chemical Identification and Tracking Local Transformations. 2017 , 11, 12742-12752		183
2177	Running 8-bit dynamic fixed-point convolutional neural network on low-cost ARM platforms. 2017 ,		6
2176	Deep Fully Convolutional Networks for the Detection of Informal Settlements in VHR Images. 2017 , 14, 2325-2329		85
2175	Everything You Wanted to Know about Deep Learning for Computer Vision but Were Afraid to Ask. 2017 ,		37
2174	Parsing floor plan images. 2017 ,		27
2173	Gated Feedback Refinement Network for Dense Image Labeling. 2017 ,		69

2172	RoomNet: End-to-End Room Layout Estimation. 2017,	61
2171	Exploiting Spatial Structure for Localizing Manipulated Image Regions. 2017,	61
2170	RGBD image segmentation using deep edge. 2017,	1
2169	Wire detection using synthetic data and dilated convolutional networks for unmanned aerial vehicles. 2017,	15
2168	Label propagation in RGB-D video. 2017,	5
2167	Distantly Supervised Road Segmentation. 2017,	4
2166	Learning to Segment Affordances. 2017,	8
2165	Leveraging weak segmentation for multi-object tracking system. 2017,	
2164	Automated red blood cells extraction from holographic images using fully convolutional neural networks. 2017, 8, 4466-4479	24
2163	Edge Enhanced Traffic Scene Segmentation Algorithm with Deep Neural Network. 2017,	
2162	Deep Learning-Based Iris Segmentation for Iris Recognition in Visible Light Environment. 2017, 9, 263	55
2161	A Multiorgan Segmentation Model for CT Volumes via Full Convolution-Deconvolution Network. 2017, 2017, 6941306	7
2160	Automatic colon polyp detection using Convolutional encoder-decoder model. 2017,	7
2159	Coupled autoencoders learning for zero-shot classification with domain shift. 2017,	1
2158	Fully automated, deep learning segmentation of oxygen-induced retinopathy images. 2017, 2,	23
2157	Multi-Level Contextual RNNs With Attention Model for Scene Labeling. 2018, 19, 3475-3485	20
2156	Contour-aware network for semantic segmentation via adaptive depth. 2018, 284, 27-35	22
2155	Deep Learning Based Multimodal Brain Tumor Diagnosis. 2018, 149-158	20

2154	Deep learning with convolutional neural network in radiology. 2018 , 36, 257-272	136
2153	Multi-channel multi-scale fully convolutional network for 3D perivascular spaces segmentation in 7T MR images. 2018 , 46, 106-117	58
2152	Automatic road detection system for an airLand amphibious car drone. 2018 , 85, 51-59	10
2151	Large-scale 3D Semantic Mapping Using Stereo Vision. 2018 , 15, 194-206	11
2150	. 2018 , 56, 3277-3289	19
2149	Deep learning based image recognition for crack and leakage defects of metro shield tunnel. 2018 , 77, 166-176	161
2148	A comparative review of plausible hole filling strategies in the context of scene depth image completion. 2018 , 72, 39-58	19
2147	Object detection via deeply exploiting depth information. 2018 , 286, 58-66	12
2146	Road Detection From Remote Sensing Images by Generative Adversarial Networks. 2018 , 6, 25486-25494	47
2145	Spatial aggregation of holistically-nested convolutional neural networks for automated pancreas localization and segmentation. 2018 , 45, 94-107	162
2144	Transfer of content-aware vignetting effect from paintings to photographs. 2018 , 77, 23851-23875	
2143	Deep Learning for Quantification of Epicardial and Thoracic Adipose Tissue From Non-Contrast CT. 2018 , 37, 1835-1846	85
2142	weedNet: Dense Semantic Weed Classification Using Multispectral Images and MAV for Smart Farming. 2018 , 3, 588-595	133
2141	Environmental microorganism classification using conditional random fields and deep convolutional neural networks. 2018 , 77, 248-261	44
2140	A convolutional autoencoder approach for mining features in cellular electron cryo-tomograms and weakly supervised coarse segmentation. 2018 , 202, 150-160	24
2139	Prediction of Tissue Outcome and Assessment of Treatment Effect in Acute Ischemic Stroke Using Deep Learning. 2018 , 49, 1394-1401	92
2138	Convolutional encoder-decoder networks for pixel-wise ear detection and segmentation. 2018 , 7, 175-184	23
2137	Soft computing approaches for image segmentation: a survey. 2018 , 77, 28483-28537	53

2136	Methods and datasets on semantic segmentation: A review. 2018 , 304, 82-103	79
2135	Image Segmentation for Intensity Inhomogeneity in Presence of High Noise. 2018 , 27, 3729-3738	39
2134	Detection of pollen bearing honey bees in hive entrance images. 2018 ,	3
2133	Sharpness-Aware Low-Dose CT Denoising Using Conditional Generative Adversarial Network. 2018 , 31, 655-669	95
2132	Bayesian convolutional neural network based MRI brain extraction on nonhuman primates. 2018 , 175, 32-44	34
2131	Diverse lesion detection from retinal images by subspace learning over normal samples. 2018 , 297, 59-70	5
2130	Thermal colorization using deep neural network. 2018 ,	3
2129	Symmetrical Dense-Shortcut Deep Fully Convolutional Networks for Semantic Segmentation of Very-High-Resolution Remote Sensing Images. 2018 , 11, 1633-1644	95
2128	Use of 2D U-Net Convolutional Neural Networks for Automated Cartilage and Meniscus Segmentation of Knee MR Imaging Data to Determine Relaxometry and Morphometry. 2018 , 288, 177-185	185
2127	. 2018 , 20, 1987-1999	11
2126	Deep convolutional neural network and 3D deformable approach for tissue segmentation in musculoskeletal magnetic resonance imaging. 2018 , 79, 2379-2391	163
2125	RGB-D object detection and semantic segmentation for autonomous manipulation in clutter. 2018 , 37, 437-451	56
2124	Deep Learning MR Imaging-based Attenuation Correction for PET/MR Imaging. 2018 , 286, 676-684	229
2123	A Multi-Modal, Discriminative and Spatially Invariant CNN for RGB-D Object Labeling. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2018 , 40, 2051-2065	13.3 25
2122	Beyond RGB: Very high resolution urban remote sensing with multimodal deep networks. 2018 , 140, 20-32	232
2121	Classification with an edge: Improving semantic image segmentation with boundary detection. 2018 , 135, 158-172	324
2120	Deep Learning in Nuclear Medicine and Molecular Imaging: Current Perspectives and Future Directions. 2018 , 52, 109-118	42
2119	Robust brain ROI segmentation by deformation regression and deformable shape model. 2018 , 43, 198-213	17

2118	Deep Learning Markov Random Field for Semantic Segmentation. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2018 , 40, 1814-1828	13.3	60
2117	Simultaneous Event Localization and Recognition in Surveillance Video. 2018 ,		0
2116	DROAN - Disparity-Space Representation for Obstacle Avoidance: Enabling Wire Mapping & Avoidance. 2018 ,		2
2115	Segmentation of Thermal Breast Images Using Convolutional and Deconvolutional Neural Networks. 2018 ,		6
2114	3D Geometry-Aware Semantic Labeling of Outdoor Street Scenes. 2018 ,		7
2113	3D Semantic Mapping in Greenhouses for Agricultural Mobile Robots with Robust Object Recognition Using Robots' Trajectory. 2018 ,		4
2112	Active Learning Approaches for Deforested Area Classification. 2018 ,		2
2111	Dense Decoder Shortcut Connections for Single-Pass Semantic Segmentation. 2018 ,		52
2110	Deep Convolutional Neural Networks Capabilities for Binary Classification of Polar Mesocyclones in Satellite Mosaics. 2018 , 9, 426		11
2109	Unsupervised Image Segmentation by Backpropagation. 2018 ,		59
2108	Deep Learning Based Semantic Labelling of 3D Point Cloud in Visual SLAM. 2018 , 428, 012023		2
2107	Online Road Detection under a Shadowy Traffic Image Using a Learning-Based Illumination-Independent Image. 2018 , 10, 707		5
2106	Combining ElasticFusion with PSPNet for RGB-D Based Indoor Semantic Mapping. 2018 ,		5
2105	Automatic Raft Labeling for Remote Sensing Images via Dual-Scale Homogeneous Convolutional Neural Network. 2018 , 10, 1130		24
2104	NU-Net: Deep Residual Wide Field of View Convolutional Neural Network for Semantic Segmentation. 2018 ,		6
2103	Semantic Segmentation from Sparse Labeling Using Multi-Level Superpixels. 2018 ,		2
2102	Vertebrae Segmentation from X-ray Images Using Convolutional Neural Network. 2018 ,		3
2101	An Environmental Perception and Navigational Assistance System for Visually Impaired Persons Based on Semantic Stixels and Sound Interaction. 2018 ,		3

2100	Real-Time Object Pose Estimation with Pose Interpreter Networks. 2018,	9
2099	A Survey on Semantic Segmentation. 2018,	10
2098	. 2018,	110
2097	Real-Time Monocular Depth Estimation Using Synthetic Data with Domain Adaptation via Image Style Transfer. 2018,	104
2096	SGPN: Similarity Group Proposal Network for 3D Point Cloud Instance Segmentation. 2018,	166
2095	Stacked U-Nets for Ground Material Segmentation in Remote Sensing Imagery. 2018,	22
2094	Minimizing Supervision for Free-Space Segmentation. 2018,	7
2093	An Effective CNN Approach for Vertebrae Segmentation from 3D CT Images. 2018,	1
2092	Multi-task Learning Using Uncertainty to Weigh Losses for Scene Geometry and Semantics. 2018,	159
2091	Deep Learning Based Supervised Semantic Segmentation of Electron Cryo-Subtomograms. 2018,	4
2090	Self-supervised Railway Pantograph Image Component Retrieval with Geometry Prior. 2018,	
2089	Segmentation of Green Vegetation in the Field Using Deep Neural Networks*. 2018,	2
2088	Deep learning approaches for unwrapping phase images with steep spatial gradients: a simulation. 2018,	2
2087	Deep Transfer Learning for Segmentation of Anatomical Structures in Chest Radiographs. 2018,	7
2086	Finger-vein recognition using deep fully convolutional neural semantic segmentation networks: The impact of training data. 2018,	13
2085	Large-Scale Semantic Classification: Outcome of the First Year of Inria Aerial Image Labeling Benchmark. 2018,	38
2084	Training an FCN with Synthetic Images for Component Segmentation with Applications in Orientation Estimation and Image Inpainting. 2018,	
2083	Evaluating deep semantic segmentation networks for object detection in maritime surveillance. 2018,	14

2082	Implementation of Hybrid Deep Learning Architecture on Loop-Closure Detection. 2018,	2
2081	Structured Scene Decoding with Finite State Machines. 2018,	
2080	Attribute-aware Semantic Segmentation of Road Scenes for Understanding Pedestrian Orientations. 2018,	9
2079	Pixel-level Crack Detection using U-Net. 2018,	14
2078	Learning Semantic Segmentation with Diverse Supervision. 2018,	7
2077	Characterize the transition from menus to hotkeys. 2018,	0
2076	Overcoming Missing and Incomplete Modalities with Generative Adversarial Networks for Building Footprint Segmentation. 2018,	3
2075	Cryo-electron microscope image denoising based on the geodesic distance. 2018, 18, 18	4
2074	Fusion of aerial lidar and images for road segmentation with deep CNN. 2018,	6
2073	Fusion Scheme for Semantic and Instance-level Segmentation. 2018,	3
2072	Progressive Refinement: A Method of Coarse-to-Fine Image Parsing Using Stacked Network. 2018,	1
2071	f-CNNx: A Toolflow for Mapping Multiple Convolutional Neural Networks on FPGAs. 2018,	8
2070	Predicting Polarization Beyond Semantics for Wearable Robotics. 2018,	6
2069	D-LinkNet: LinkNet with Pretrained Encoder and Dilated Convolution for High Resolution Satellite Imagery Road Extraction. 2018,	202
2068	Modular Sensor Fusion for Semantic Segmentation. 2018,	6
2067	Fast Cloud Segmentation Using Convolutional Neural Networks. 2018, 10, 1782	48
2066	SuperPoint: Self-Supervised Interest Point Detection and Description. 2018,	376
2065	Overview of Image Segmentation and Its Application on Free Space Detection. 2018,	3

2064	Hyperspectral Image Segmentation of Retinal Vasculature, Optic Disc and Macula. 2018,	1
2063	MS-GAN: GAN-Based Semantic Segmentation of Multiple Sclerosis Lesions in Brain Magnetic Resonance Imaging. 2018,	16
2062	CubeSat cloud detection based on JPEG2000 compression and deep learning. 2018, 10, 168781401880817	4
2061	. 2018,	26
2060	Large Kernel Refine Fusion Net for Neuron Membrane Segmentation. 2018,	4
2059	Crack-pot: Autonomous Road Crack and Pothole Detection. 2018,	19
2058	Singling out ischemic lesion zones and transplanted mesenchymal stem cells in the rat brain MRI. 2018,	
2057	Multi-Lane Detection via Multi-Task Network in Various Road Scenes. 2018,	2
2056	Distance to Center of Mass Encoding for Instance Segmentation. 2018,	5
2055	Diffy: a DJVU-Free Differential Deep Neural Network Accelerator. 2018,	25
2054	A Deep Fully Convolution Neural Network for Semantic Segmentation Based on Adaptive Feature Fusion. 2018,	4
2053	. 2018,	4
2052	A Robust Iris Segmentation Using Fully Convolutional Network with Dilated Convolutions. 2018,	9
2051	Predicting Out-of-View Feature Points for Model-Based Camera Pose Estimation. 2018,	2
2050	Learning a Discriminative Feature Network for Semantic Segmentation. 2018,	334
2049	Autonomous Indoor Robot Navigation via Siamese Deep Convolutional Neural Network. 2018,	3
2048	Self-Supervised Learning of the Drivable Area for Autonomous Vehicles. 2018,	5
2047	Predicting Ego-Vehicle Paths from Environmental Observations with a Deep Neural Network. 2018,	3

2046	Semantic Grid Estimation with Occupancy Grids and Semantic Segmentation Networks. 2018,	4
2045	Real-time Semantic Segmentation for Road Scene. 2018,	3
2044	Recognition Effects of Deep Convolutional Neural Network on Smudged Handwritten Digits. 2018,	
2043	On Exploiting Per-Pixel Motion Conflicts to Extract Secondary Motions. 2018,	
2042	Human Brain Tissue Segmentation in fMRI using Deep Long-Term Recurrent Convolutional Network. 2018,	3
2041	. 2018,	5
2040	Convolutional Neural Network-Based Remote Sensing Images Segmentation Method for Extracting Winter Wheat Spatial Distribution. 2018, 8, 1981	5
2039	Semantic Binary Segmentation Using Convolutional Networks without Decoders. 2018,	15
2038	Real-Time Image Semantic Segmentation Networks with Residual Depth-Wise Separable Blocks. 2018,	1
2037	Grading Prenatal Hydronephrosis from Ultrasound Imaging Using Deep Convolutional Neural Networks. 2018,	5
2036	Image Segmentation by Deep Learning of Disjunctive Normal Shape Model Shape Representation. 2018,	
2035	Face Parsing for Mobile AR Applications. 2018,	2
2034	ECNet: An Efficient and Context-Aware Network for Street Scene Parsing. 2018,	0
2033	Quantifying Intertidal Zone Species Using Semantic Segmentation. 2018,	
2032	Detection of Semantic Grasping-Parameter using Part-Affordance Recognition. 2018,	1
2031	Fully Convolutional Networks and Generative Adversarial Networks Applied to Sclera Segmentation. 2018,	14
2030	Reflective Field for Pixel-Level Tasks. 2018,	
2029	GPU Cuda JSEG Segmentation Algorithm associated with Deep Learning Classifier for Electrical Network Images Identification. 2018, 126, 557-565	4

2028	Apple Tree Trunk and Branch Segmentation for Automatic Trellis Training Using Convolutional Neural Network Based Semantic Segmentation. 2018 , 51, 75-80	26
2027	Training Flownet on Monkaa Dataset. 2018 ,	
2026	Semantic Grid Estimation with a Hybrid Bayesian and Deep Neural Network Approach. 2018 ,	12
2025	. 2018 ,	7
2024	IDLE: Integrated Deep Learning Engine with Adaptive Task Scheduling on Heterogeneous GPUs. 2018 ,	
2023	Real-Time Object Detection and Semantic Segmentation Hardware System with Deep Learning Networks. 2018 ,	6
2022	Defect Detection of Rail Surface with Deep Convolutional Neural Networks. 2018 ,	8
2021	The Earth Ain't Flat: Monocular Reconstruction of Vehicles on Steep and Graded Roads from a Moving Camera. 2018 ,	9
2020	Exploiting semantics in adversarial training for image-level domain adaptation. 2018 ,	9
2019	Development of Coral-Coverage Estimation Method Using Deep Learning and Sea Trial: at Kujuku-Shima Islands. 2018 ,	1
2018	Towards Scene Understanding Implementing the Stixel World. 2018 ,	
2017	Efficient Semantic Segmentation Using Gradual Grouping. 2018 ,	5
2016	Gradient Domain Based Processing Method for Image Synthesis. 2018 ,	
2015	JOINT IMAGE SEGMENTATION AND CLASSIFICATION WITH APPLICATION TO CLUTTERED CORAL IMAGES. 2018 ,	
2014	Evaluation of Neural Network-Based Sensing and Perception in Experimental Vehicles. 2018 ,	
2013	Semantic Image Segmentation Based on Attentions to Intra Scales and Inner Channels. 2018 ,	1
2012	Segmentation of Lumbar Spine MRI Images for Stenosis Detection Using Patch-Based Pixel Classification Neural Network. 2018 ,	4
2011	DFF-DEN: Deep Feature Flow with Detail Enhancement Network for Hand Segmentation in Depth Video. 2018 ,	

2010	Understanding 3D Semantic Structure around the Vehicle with Monocular Cameras. 2018,	9
2009	Learning to Drive: Using Visual Odometry to Bootstrap Deep Learning for Off-Road Path Prediction. 2018,	3
2008	Road Lane Semantic Segmentation for High Definition Map. 2018,	8
2007	On the Impact of Illumination-Invariant Image Pre-transformation for Contemporary Automotive Semantic Scene Understanding. 2018,	5
2006	Semantic segmentation-based traffic sign detection and recognition using deep learning techniques. 2018,	
2005	CHRONIC WOUND TISSUE CLASSIFICATION USING CONVOLUTIONAL NETWORKS AND COLOR SPACE REDUCTION. 2018,	8
2004	Multi-plane Image Stitching Base on Image Semantic under Large Viewpoint Changes. 2018,	
2003	Data-Driven, 3-D Classification of Person-Object Relationships and Semantic Context Clustering for Robotics and AI Applications. 2018,	1
2002	Change Detection Based on the Combination of Improved SegNet Neural Network and Morphology. 2018,	9
2001	Visual Object Recognition and Pose Estimation Based on a Deep Semantic Segmentation Network. 2018, 18, 9370-9381	24
2000	Integrating Aerial and Street View Images for Urban Land Use Classification. 2018, 10, 1553	61
1999	A Deep Learning Approach on Building Detection from Unmanned Aerial Vehicle-Based Images in Riverbank Monitoring. 2018, 18,	31
1998	Aerial Image Semantic Segmentation Using Neural Search Network Architecture. 2018, 113-124	4
1997	SalNet: Edge Constraint Based End-to-End Model for Salient Object Detection. 2018, 186-198	5
1996	Pulmonary Nodule Segmentation Method of CT Images Based on 3D-FCN. 2018, 134-141	
1995	Multi-Task Feature Selection for Advancing Performance of Image Segmentation. 2018,	1
1994	Fusenet: End- to-End Multispectral Vhr Image Fusion and Classification. 2018,	6
1993	Semantic Segmentation by Integrating Classifiers for Different Difficulty Levels. 2018, 607-615	

1992	Learning with A Generative Adversarial Network From a Positive Unlabeled Dataset for Image Classification. 2018,	8
1991	Ensemble Knowledge Transfer for Semantic Segmentation. 2018,	20
1990	Compressed Convex Spectral Embedding for Bird Species Classification. 2018,	4
1989	Pixel-Label-Based Segmentation of Cross-Sectional Brain MRI Using Simplified SegNet Architecture-Based CNN. 2018, 2018, 3640705	21
1988	Faster R-CNN for Robust Pedestrian Detection Using Semantic Segmentation Network. 2018, 12, 64	20
1987	Supervised Classification of Multisensor Remotely Sensed Images Using a Deep Learning Framework. 2018, 10, 1429	45
1986	Dense RGB-D Semantic Mapping with Pixel-Voxel Neural Network. 2018, 18,	7
1985	Urban Land Use Classification Based on Aerial and Ground Images. 2018,	3
1984	Semantic Segmentation with Inverted Residuals and Atrous Convolution. 2018,	4
1983	Attention Forest for Semantic Segmentation. 2018, 550-561	1
1982	Comparison of Different Convolutional Neural Network Architectures for Satellite Image Segmentation. 2018,	7
1981	High-Level Interpretation of Urban Road Maps Fusing Deep Learning-Based Pixelwise Scene Segmentation and Digital Navigation Maps. 2018, 2018, 1-15	1
1980	Dark Spot Detection in SAR Images of Oil Spill Using Segnet. 2018, 8, 2670	23
1979	Interpolation Kernels in Fully Convolutional Networks and their Effect in Robot Vision Tasks. 2018,	1
1978	. 2018,	22
1977	Cell Image Segmentation by Integrating Multiple CNNs. 2018,	6
1976	Deep Semantic Segmentation of Aerial Imagery Based on Multi-Modal Data. 2018,	3
1975	GT-Net: A Deep Learning Network for Gastric Tumor Diagnosis. 2018,	5

1974	An Audio-Visual Method for Room Boundary Estimation and Material Recognition. 2018,	2
1973	Impacts of Street-Visible Greenery on Housing Prices: Evidence from a Hedonic Price Model and a Massive Street View Image Dataset in Beijing. 2018, 7, 104	58
1972	Efficient Rail Area Detection Using Convolutional Neural Network. 2018, 6, 77656-77664	22
1971	Semantic Segmentation Based Building Extraction Method Using Multi-source GIS Map Datasets and Satellite Imagery. 2018,	10
1970	Fast and Accurate Sea-Land Segmentation based on Improved SeNet and Coastline Database for Large-Scale Image. 2018,	0
1969	Extracting Building Footprints from Satellite Images using Convolutional Neural Networks. 2018,	1
1968	RGB-D Semantic Segmentation: A Review. 2018,	1
1967	Joint Stem Detection and Crop-Weed Classification for Plant-Specific Treatment in Precision Farming. 2018,	17
1966	Fast and Accurate Semantic Mapping through Geometric-based Incremental Segmentation. 2018,	19
1965	Adversarial Domain Adaptation with a Domain Similarity Discriminator for Semantic Segmentation of Urban Areas. 2018,	8
1964	Dense Deconvolutional Network for Semantic Segmentation. 2018,	4
1963	Vehicle Detection and Localization using 3D LIDAR Point Cloud and Image Semantic Segmentation. 2018,	11
1962	Stacked Encoder-Decoders for Accurate Semantic Segmentation of Very High Resolution Satellite Datasets. 2018,	3
1961	A Deep Convolutional Neural Network for Semantic Pixel-Wise Segmentation of Road and Pavement Surface Cracks. 2018,	28
1960	Parasitic Network: Learning-Based Network Downsizing of Very Deep Neural Networks for Computer Vision. 2018,	1
1959	Fine-Grained Vehicle Representations for Autonomous Driving. 2018,	0
1958	Exploring New Backbone and Attention Module for Semantic Segmentation in Street Scenes. 2018, 6, 71566-71580	13
1957	Anomaly detection using local regions in road images acquired from a hand-held camera. 2018,	2

1956	A CNN Architecture for Efficient Semantic Segmentation of Street Scenes. 2018,	6
1955	Semantic Food Segmentation for Automatic Dietary Monitoring. 2018,	5
1954	A Deep Convolutional Encoder-Decoder Network for Page Segmentation of Historical Handwritten Documents Into Text Zones. 2018,	1
1953	. 2018,	2
1952	Deep Semantic Segmentation in an AUV for Online Posidonia Oceanica Meadows Identification. 2018, 6, 60956-60967	20
1951	Optimizing CNN-based Segmentation with Deeply Customized Convolutional and Deconvolutional Architectures on FPGA. 2018, 11, 1-22	23
1950	Automatic Scaling of Fish Images. 2018,	4
1949	Coupled Longitudinal and Lateral Control of a Vehicle using Deep Learning. 2018,	10
1948	Diagonalwise Refactorization: An Efficient Training Method for Depthwise Convolutions. 2018,	7
1947	Accelerating the image processing by the optimization strategy for deep learning algorithm DBN. 2018, 2018,	6
1946	Automatic Segmentation of Kidney and Renal Tumor in CT Images Based on 3D Fully Convolutional Neural Network with Pyramid Pooling Module. 2018,	18
1945	Fast Portrait Matting Using Spatial Detail-Preserving Network. 2018, 329-339	
1944	Multi-scale Recurrent Encoder-Decoder Network for Dense Temporal Classification. 2018,	7
1943	UNCERTAINTY MODELING AND INTERPRETABILITY IN CONVOLUTIONAL NEURAL NETWORKS FOR POLYP SEGMENTATION. 2018,	16
1942	Accurately Predicting the Location of Code Fragments in Programming Video Tutorials Using Deep Learning. 2018,	9
1941	High-Resolution Aerial Imagery Semantic Labeling with Dense Pyramid Network. 2018, 18,	19
1940	3D MAX-Net: A Multi-Scale Spatial Contextual Network for 3D Point Cloud Semantic Segmentation. 2018,	8
1939	SUSAN: segment unannotated image structure using adversarial network. 2019, 81, 3330-3345	28

1938	Video Saliency Detection Using Deep Convolutional Neural Networks. 2018 , 308-319	1
1937	Spatialising uncertainty in image segmentation using weakly supervised convolutional neural networks: a case study from historical map processing. 2018 , 12, 2084-2091	10
1936	The Effect of Focal Loss in Semantic Segmentation of High Resolution Aerial Image. 2018 ,	10
1935	Handling Missing Annotations for Semantic Segmentation with Deep ConvNets. 2018 , 20-28	9
1934	Retrieval Across Optical and SAR Images with Deep Neural Network. 2018 , 392-402	0
1933	Contextual Additive Networks to Efficiently Boost 3D Image Segmentations. 2018 , 92-100	3
1932	Semantic Segmentation With Global Encoding and Dilated Decoder in Street Scenes. 2018 , 6, 50333-50343	14
1931	XmoNet: A Fully Convolutional Network for Cross-Modality MR Image Inference. 2018 , 129-137	2
1930	Prostate Cancer Classification on VERDICT DW-MRI Using Convolutional Neural Networks. 2018 , 319-327	5
1929	Detecting Building Edges from High Spatial Resolution Remote Sensing Imagery Using Richer Convolution Features Network. 2018 , 10, 1496	39
1928	Retinal Vessel Segmentation via Multiscaled Deep-Guidance. 2018 , 158-168	3
1927	Segmentation of breast anatomy for automated whole breast ultrasound images with boundary regularized convolutional encoder-decoder network. 2018 , 321, 178-186	35
1926	A Novel Bayesian Model Incorporating Deep Neural Network and Statistical Shape Model for Pancreas Segmentation. 2018 , 480-487	16
1925	Fully Convolutional Network-Based Eyeball Segmentation from Sparse Annotation for Eye Surgery Simulation Model. 2018 , 118-126	1
1924	Robot Navigation from Human Demonstration: Learning Control Behaviors. 2018 ,	8
1923	Extracting Building Boundaries from High Resolution Optical Images and LiDAR Data by Integrating the Convolutional Neural Network and the Active Contour Model. 2018 , 10, 1459	32
1922	Multi-View 3D Entangled Forest for Semantic Segmentation and Mapping. 2018 ,	3
1921	Y-Net: Joint Segmentation and Classification for Diagnosis of Breast Biopsy Images. 2018 , 893-901	46

1920	Real-Time Semantic Segmentation of Crop and Weed for Precision Agriculture Robots Leveraging Background Knowledge in CNNs. 2018,	107
1919	Competition vs. Concatenation in Skip Connections of Fully Convolutional Networks. 2018, 214-222	5
1918	Multilayered Deep Structure Tensor Delaunay Triangulation and Morphing Based Automated Diagnosis and 3D Presentation of Human Macula. 2018, 42, 223	6
1917	ERN: Edge Loss Reinforced Semantic Segmentation Network for Remote Sensing Images. 2018, 10, 1339	42
1916	LMNet: Real-time Multiclass Object Detection on CPU Using 3D LiDAR. 2018,	16
1915	Modeling and synthesis of kinship patterns of facial expressions. 2018, 79, 133-143	2
1914	Fusion of encoder-decoder deep networks improves delineation of multiple nuclear phenotypes. 2018, 19, 294	10
1913	A Multiresolution Convolutional Neural Network with Partial Label Training for Annotating Reflectance Confocal Microscopy Images of Skin. 2018, 292-299	7
1912	Development and validation of a deep-learning algorithm for the detection of polyps during colonoscopy. 2018, 2, 741-748	211
1911	Multi-part segmentation for porcine offal inspection with auto-context and adaptive atlases. 2018, 112, 290-296	3
1910	Dense Pyramid Network for Semantic Segmentation of High Resolution Aerial Imagery. 2018, 362-369	
1909	. 2018,	2
1908	Brain Tumor Segmentation Based on Dilated Convolution Refine Networks. 2018,	9
1907	Semantic Scene Segmentation for Indoor Robot Navigation via Deep Learning. 2018,	0
1906	Robust cell particle detection to dense regions and subjective training samples based on prediction of particle center using convolutional neural network. 2018, 13, e0203646	2
1905	Real-time Traffic Scene Segmentation Based on Multi-Feature Map and Deep Learning. 2018,	3
1904	Sparse and Dense Data with CNNs: Depth Completion and Semantic Segmentation. 2018,	102
1903	High-Performance Optic Disc Segmentation Using Convolutional Neural Networks. 2018,	6

1902	Xylem Vessels Segmentation Through a Deep Learning Approach: a First Look. 2018,	4
1901	A Novel Approach to Droplet's 3D Shape Recovery Based on Mask R-CNN and Improved Lambert-Phong Model. 2018, 9,	9
1900	Detail Preserving Depth Estimation from a Single Image Using Attention Guided Networks. 2018,	24
1899	3D Semantic Mapping Based on Convolutional Neural Networks. 2018,	3
1898	Deep Semantic Segmentation Neural Networks of Railway Scene. 2018,	1
1897	Multiregion segmentation of bladder cancer structures in MRI with progressive dilated convolutional networks. 2018, 45, 5482-5493	31
1896	Human-Centric Scene Understanding from Single View 360 Video. 2018,	2
1895	. 2018,	7
1894	WeedMap: A Large-Scale Semantic Weed Mapping Framework Using Aerial Multispectral Imaging and Deep Neural Network for Precision Farming. 2018, 10, 1423	89
1893	Computational Texture and Patterns: From Textons to Deep Learning. 2018, 8, 1-113	1
1892	Simultaneous Segmentation of Multiple Retinal Pathologies Using Fully Convolutional Deep Neural Network. 2018, 313-324	5
1891	Image denoising via deep network based on edge enhancement. 2018, 1	4
1890	A Multiple-Feature Reuse Network to Extract Buildings from Remote Sensing Imagery. 2018, 10, 1350	41
1889	Towards a Meaningful 3D Map Using a 3D Lidar and a Camera. 2018, 18,	15
1888	Single-View Food Portion Estimation: Learning Image-to-Energy Mappings Using Generative Adversarial Networks. 2018,	15
1887	PedNet: A Spatio-Temporal Deep Convolutional Neural Network for Pedestrian Segmentation. 2018, 4, 107	12
1886	Handwritten Bangla Character Recognition Using the State-of-the-Art Deep Convolutional Neural Networks. 2018, 2018, 6747098	35
1885	3D Façade Labeling over Complex Scenarios: A Case Study Using Convolutional Neural Network and Structure-From-Motion. 2018, 10, 1435	11

1884	Generalizability vs. Robustness: Investigating Medical Imaging Networks Using Adversarial Examples. 2018 , 493-501	27
1883	Volume-Based Analysis of 6-Month-Old Infant Brain MRI for Autism Biomarker Identification and Early Diagnosis. 2018 , 11072, 411-419	41
1882	Deep Random Walk for Drusen Segmentation from Fundus Images. 2018 , 48-55	3
1881	Densely Deep Supervised Networks with Threshold Loss for Cancer Detection in Automated Breast Ultrasound. 2018 , 641-648	14
1880	Automated Process for Incorporating Drivable Path into Real-Time Semantic Segmentation. 2018 ,	4
1879	Deep Multi-class Eye Segmentation for Ocular Biometrics. 2018 ,	22
1878	U-Segnet: Fully Convolutional Neural Network Based Automated Brain Tissue Segmentation Tool. 2018 ,	26
1877	. 2018 ,	4
1876	Intra-Retinal Layer Segmentation of Optical Coherence Tomography Using 3D Fully Convolutional Networks. 2018 ,	4
1875	Effective Deep Learning for Semantic Segmentation Based Bleeding Zone Detection in Capsule Endoscopy Images. 2018 ,	18
1874	Learning to Detect Aircraft for Long-Range Vision-Based Sense-and-Avoid Systems. 2018 , 3, 4383-4390	13
1873	Using GANs to Enable Semantic Segmentation of Ranging Sensor Data. 2018 ,	1
1872	A Low Cost Vision-Based Road-Following System for Mobile Robots. 2018 , 8, 1635	9
1871	Integrating guided filter into fuzzy clustering for noisy image segmentation. 2018 , 83, 235-248	31
1870	. 2018 , 15, 1472-1472	1
1869	A Boundary Regulated Network for Accurate Roof Segmentation and Outline Extraction. 2018 , 10, 1195	33
1868	AtlasNet: Multi-atlas Non-linear Deep Networks for Medical Image Segmentation. 2018 , 658-666	16
1867	Building-A-Nets: Robust Building Extraction From High-Resolution Remote Sensing Images With Adversarial Networks. 2018 , 11, 3680-3687	47

1866	Ongoing Evolution of Visual SLAM from Geometry to Deep Learning: Challenges and Opportunities. 2018 , 10, 875-889	28
1865	Efficient and Lightweight Convolutional Neural Network for Lane Mark and Road Segmentation. 2018 ,	
1864	Modular microstructure design to build neuronal networks of defined functional connectivity. 2018 , 122, 75-87	36
1863	Real Time Hand Segmentation on Frugal Headmounted Device for Gestural Interface. 2018 ,	2
1862	A Novel Method for Detecting Image Forgery Based on Convolutional Neural Network. 2018 ,	7
1861	Quantifying Urban Surroundings Using Deep Learning Techniques: A New Proposal. 2018 , 2, 78	3
1860	An EM-based semi-supervised deep learning approach for semantic segmentation of histopathological images from radical prostatectomies. 2018 , 69, 125-133	24
1859	Chest X-Ray Image Segmentation Using Encoder-Decoder Convolutional Network. 2018 ,	6
1858	A Deep Feature Learning Method for Drill Bits Monitoring Using the Spectral Analysis of the Acoustic Signals. 2018 , 18,	7
1857	Building Footprint Extraction From VHR Remote Sensing Images Combined With Normalized DSMS Using Fused Fully Convolutional Networks. 2018 , 11, 2615-2629	61
1856	Recovering from Random Pruning: On the Plasticity of Deep Convolutional Neural Networks. 2018 ,	16
1855	Automatic Segmentation and Counting of Aphid Nymphs on Leaves Using Convolutional Neural Networks. 2018 , 8, 129	17
1854	Unsupervised pixel-wise classification for Chaetoceros image segmentation. 2018 , 318, 261-270	21
1853	MoE-SPNet: A mixture-of-experts scene parsing network. 2018 , 84, 226-236	7
1852	CDeep3M-Plug-and-Play cloud-based deep learning for image segmentation. 2018 , 15, 677-680	90
1851	Convolutional neural networks for fault interpretation in seismic images. 2018 ,	55
1850	Seismic facies classification using different deep convolutional neural networks. 2018 ,	56
1849	Semantic Segmentation of Brain Tumor from MRI Images. 2018 ,	

1848	Automatic salt-body classification using deep-convolutional neural network. 2018,	56
1847	Vegetation density estimation in the wild. 2018,	
1846	Technical Note: Deep learning based MRAC using rapid ultrashort echo time imaging. 2018, 45, 3697	32
1845	Segmentation of histological images and fibrosis identification with a convolutional neural network. 2018, 98, 147-158	23
1844	Hyperspectral image classification via a random patches network. 2018, 142, 344-357	104
1843	CNN based sub-pixel mapping for hyperspectral images. 2018, 311, 51-64	28
1842	A survey on deep learning techniques for image and video semantic segmentation. 2018, 70, 41-65	487
1841	DeepUNet: A Deep Fully Convolutional Network for Pixel-Level Sea-Land Segmentation. 2018, 11, 3954-3962	115
1840	Layer-by-layer Adaptively Optimized ECC of NAND flash-based SSD Storing Convolutional Neural Network Weight for Scene Recognition. 2018,	4
1839	FPGA based Deterministic Latency Image Acquisition and Processing System for Automated Driving Systems. 2018,	3
1838	Detection of Vehicles in Multisensor Data via Multibranch Convolutional Neural Networks. 2018, 11, 4299-4316	17
1837	Machine learning-based dual-energy CT parametric mapping. 2018, 63, 125001	13
1836	A multi-scale fully convolutional network for semantic labeling of 3D point clouds. 2018, 143, 191-204	59
1835	Stacked convolutional auto-encoders for single space target image blind deconvolution. 2018, 313, 295-305	16
1834	Arterioles and Venules Classification in Retinal Images Using Fully Convolutional Deep Neural Network. 2018, 659-668	16
1833	Multispecies Fruit Flower Detection Using a Refined Semantic Segmentation Network. 2018, 3, 3003-3010	46
1832	Deep patch-based priors under a fully convolutional encoder-decoder architecture for interstitial lung disease segmentation. 2018,	1
1831	Learning to Segment Breast Biopsy Whole Slide Images. 2018,	14

1830	Building Extraction at Scale Using Convolutional Neural Network: Mapping of the United States. 2018 , 11, 2600-2614	100
1829	. 2018 , 56, 6361-6374	43
1828	A multi-task learning approach for meal assessment. 2018 ,	15
1827	Segnet-based gland segmentation from colon cancer histology images. 2018 ,	13
1826	Imaging through glass diffusers using densely connected convolutional networks. 2018 , 5, 803	157
1825	Towards Structured Analysis of Broadcast Badminton Videos. 2018 ,	4
1824	Deep convolutional neural network-based segmentation and classification of difficult to define metastatic spinal lesions in 3D CT data. 2018 , 49, 76-88	39
1823	Segmentation of the prostate and organs at risk in male pelvic CT images using deep learning. 2018 , 4, 055003	47
1822	Object segmentation using FCNs trained on synthetic images. 2018 , 35, 3233-3242	1
1821	Deep Learning Based Robot for Automatically Picking Up Garbage on the Grass. 2018 , 64, 382-389	39
1820	Improving Registration of Augmented Reality by Incorporating DCNNS into Visual SLAM. 2018 , 32, 1855022	5
1819	Automated chest screening based on a hybrid model of transfer learning and convolutional sparse denoising autoencoder. 2018 , 17, 63	14
1818	A Semantic Segmentation Algorithm Using FCN with Combination of BSLIC. 2018 , 8, 500	10
1817	Data-driven segmentation of post-mortem iris images. 2018 ,	6
1816	Application of algorithms for object recognition based on deep convolutional neural networks for visual navigation of a mobile robot. 2018 ,	1
1815	Deep neural networks for terrain recognition task. 2018 ,	3
1814	Transfer Learning from Synthetic Data Applied to SoilRoot Segmentation in X-Ray Tomography Images. 2018 , 4, 65	25
1813	Effective Fusion of Multi-Modal Remote Sensing Data in a Fully Convolutional Network for Semantic Labeling. 2018 , 10, 52	21

1812	MSNet: Multi-Scale Convolutional Network for Point Cloud Classification. 2018 , 10, 612	20
1811	Semantic Labeling of High Resolution Aerial Imagery and LiDAR Data with Fine Segmentation Network. 2018 , 10, 743	34
1810	Organ Segmentation in Poultry Viscera Using RGB-D. 2018 , 18,	7
1809	IrisDenseNet: Robust Iris Segmentation Using Densely Connected Fully Convolutional Networks in the Images by Visible Light and Near-Infrared Light Camera Sensors. 2018 , 18,	60
1808	Unifying Terrain Awareness for the Visually Impaired through Real-Time Semantic Segmentation. 2018 , 18,	61
1807	Memetic evolution of deep neural networks. 2018 ,	19
1806	Road segmentation for all-day outdoor robot navigation. 2018 , 314, 316-325	25
1805	Training FCNs model with lesion-size-unified dermoscopy images for lesion segmentation. 2018 ,	0
1804	Subject-Specific prior shape knowledge in feature-oriented probability maps for fully automatized liver segmentation in MR volume data. 2018 , 84, 288-300	8
1803	Video Super-Resolution via Residual Learning. 2018 , 6, 23767-23777	21
1802	Microvessel prediction in H&E Stained Pathology Images using fully convolutional neural networks. 2018 , 19, 64	15
1801	RidgeBased curvilinear structure detection for identifying road in remote sensing image and backbone in neuron dendrite image. 2018 , 77, 22857-22873	5
1800	X-View: Graph-Based Semantic Multi-View Localization. 2018 , 3, 1687-1694	47
1799	A Joint 3D-2D Based Method for Free Space Detection on Roads. 2018 ,	2
1798	An efficient and robust hybrid method for segmentation of zebrafish objects from bright-field microscope images. 2018 , 29, 1211-1225	1
1797	Semantic Segmentation for High Spatial Resolution Remote Sensing Images Based on Convolution Neural Network and Pyramid Pooling Module. 2018 , 11, 3252-3261	82
1796	Multi-scale deep encoder-decoder network for salient object detection. 2018 , 316, 95-104	8
1795	A Fusion Model for Road Detection based on Deep Learning and Fully Connected CRF. 2018 ,	5

1794	My Being to Your Place, Your Being to My Place. 2018,	4
1793	Semantic Segmentation of Underwater Imagery Using Deep Networks Trained on Synthetic Imagery. 2018, 6, 93	25
1792	DeepSolarEye: Power Loss Prediction and Weakly Supervised Soiling Localization via Fully Convolutional Networks for Solar Panels. 2018,	16
1791	Nuclei instance segmentation with dual contour-enhanced adversarial network. 2018,	8
1790	Toolflows for Mapping Convolutional Neural Networks on FPGAs. 2018, 51, 1-39	79
1789	Urban Land Cover Classification With Missing Data Modalities Using Deep Convolutional Neural Networks. 2018, 11, 1758-1768	28
1788	Dual-modality endoscopic probe for tissue surface shape reconstruction and hyperspectral imaging enabled by deep neural networks. 2018, 48, 162-176	27
1787	A Cascaded Deep Convolutional Neural Network for Joint Segmentation and Genotype Prediction of Brainstem Gliomas. 2018, 65, 1943-1952	45
1786	Rewire. 2018,	22
1785	Fast road obstacle detection method based on maximally stable extremal regions. 2018, 15, 1729881418759113	
1784	Voxelized Facial Reconstruction Using Deep Neural Network. 2018,	
1783	Fully Convolutional Networks With Sequential Information for Robust Crop and Weed Detection in Precision Farming. 2018, 3, 2870-2877	105
1782	. 2018, 20, 3266-3275	47
1781	Label-Free Nuclear Staining Reconstruction in Quantitative Phase Images Using Deep Learning. 2019, 239-242	1
1780	Multiple Resolution Residually Connected Feature Streams for Automatic Lung Tumor Segmentation From CT Images. 2019, 38, 134-144	81
1779	RGB-DI Images and Full Convolution Neural Network-Based Outdoor Scene Understanding for Mobile Robots. 2019, 68, 27-37	32
1778	Monocular Depth Estimation Using Multi-Scale Continuous CRFs as Sequential Deep Networks. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence,</i> 2019, 41, 1426-1440	13:3 32
1777	Weakly Supervised Biomedical Image Segmentation by Reiterative Learning. 2019, 23, 1205-1214	28

1776	Steel Surface Defects Detection Based on Deep Learning. 2019 , 141-149	3
1775	fpgaConvNet: Mapping Regular and Irregular Convolutional Neural Networks on FPGAs. 2019 , 30, 326-342	46
1774	FissureNet: A Deep Learning Approach For Pulmonary Fissure Detection in CT Images. 2019 , 38, 156-166	42
1773	Fully Automatic Left Atrium Segmentation From Late Gadolinium Enhanced Magnetic Resonance Imaging Using a Dual Fully Convolutional Neural Network. 2019 , 38, 515-524	58
1772	. 2019 , 57, 574-586	341
1771	Multi-scale deep context convolutional neural networks for semantic segmentation. 2019 , 22, 555-570	74
1770	A Streamlined Encoder/decoder Architecture for Melody Extraction. 2019 ,	5
1769	Deep Learning Model for Skin Lesion Segmentation: Fully Convolutional Network. 2019 , 232-242	2
1768	Automatic Whole Heart Segmentation Using a Two-Stage U-Net Framework and an Adaptive Threshold Window. 2019 , 7, 83628-83636	15
1767	Self-Supervised Drivable Area and Road Anomaly Segmentation Using RGB-D Data For Robotic Wheelchairs. 2019 , 4, 4386-4393	24
1766	Network Uncertainty Informed Semantic Feature Selection for Visual SLAM. 2019 ,	8
1765	Deep Learning: The Good, the Bad, and the Ugly. 2019 , 5, 399-426	70
1764	Computer vision algorithms and hardware implementations: A survey. 2019 , 69, 309-320	76
1763	Time-Independent Prediction of Burn Depth Using Deep Convolutional Neural Networks. 2019 , 40, 857-863	24
1762	Detecting Anomalies in Image Classification by Means of Semantic Relationships. 2019 ,	5
1761	RS-CAE-Based AR-Wiener Filtering and Harmonic Recovery for Speech Enhancement. 2019 , 27, 1752-1762	3
1760	Multiloss Function Based Deep Convolutional Neural Network for Segmentation of Retinal Vasculature into Arterioles and Venules. 2019 , 2019, 4747230	7
1759	Quality Recovery for Image Recognition. 2019 , 7, 105851-105862	3

1758	An Approach for Semantic Segmentation of Tree-like Vegetation. 2019,	4
1757	Integration of deep learning-based object recognition and robot manipulator for grasping objects. 2019,	3
1756	Validation of automated artificial intelligence segmentation of optical coherence tomography images. 2019, 14, e0220063	25
1755	Channel Count Reduction for Plane Wave Ultrasound Through Convolutional Neural Network Interpolation. 2019, 442-451	2
1754	An Adaptive Regularization Approach to Colonoscopic Polyp Detection Using a Cascaded Structure of EncoderDecoders. 2019, 21, 2091-2101	4
1753	Chassis Assembly Detection and Identification Based on Deep Learning Component Instance Segmentation. 2019, 11, 1001	3
1752	Classification of ALS Point Clouds Using End-to-End Deep Learning. 2019, 87, 75-90	23
1751	Magnetic resonance-driven pseudo CT image using patch-based multi-modal feature extraction and ensemble learning with stacked generalisation. 2019,	4
1750	Deep Convolutional Encoder-Decoders with Aggregated Multi-Resolution Skip Connections for Skin Lesion Segmentation. 2019,	8
1749	Logo Recognition by Combining Deep Convolutional Models in a Parallel Structure. 2019,	1
1748	Multi-task ADAS system on FPGA. 2019,	5
1747	Semantic Segmentation of Satellite Images Using a U-Shaped Fully Connected Network with Dense Residual Blocks. 2019,	
1746	Combining Subspace Methods and CNN Segmentation for Iris Identification. 2019,	
1745	Recurrent Flow-Guided Semantic Forecasting. 2019,	11
1744	. 2019,	4
1743	Characterizing Sources of Ineffectual Computations in Deep Learning Networks. 2019,	3
1742	Multiscale Road Extraction in Remote Sensing Images. 2019, 2019, 2373798	10
1741	An RDAU-NET model for lesion segmentation in breast ultrasound images. 2019, 14, e0221535	41

1740	TreeUNet: Adaptive Tree convolutional neural networks for subdecimeter aerial image segmentation. 2019 , 156, 1-13	65
1739	A Deep-Learning-Based Multiple Defect Detection Method for Tunnel Lining Damages. 2019 , 7, 182643-182657	0
1738	MMCNet: deep learningBased multimodal classification model using dynamic knowledge. 2019 , 1	4
1737	General Image Segmentation by Deeper Residual U-Net. 2019 ,	1
1736	Deep Learning for Multimodal Data Fusion. 2019 , 9-39	4
1735	Multimodal Semantic Segmentation: Fusion of RGB and Depth Data in Convolutional Neural Networks. 2019 , 41-64	2
1734	Fast Evaluation of Microstructure-Property Relation in Duplex Alloys Using SEM Images. 2019 , 4, 1101-1107	0
1733	Convolution-deconvolution architecture with the pyramid pooling module for semantic segmentation. 2019 , 78, 32379-32392	3
1732	DeepRange: deep-learning-based object detection and ranging in autonomous driving. 2019 , 13, 1256-1264	11
1731	Moon image segmentation with a new mixture histogram model. 2019 , 1-24	4
1730	Monocular Object and Plane SLAM in Structured Environments. 2019 , 4, 3145-3152	22
1729	A Semantic Segmentation Based Lidar SLAM System Towards Dynamic Environments. 2019 , 582-590	5
1728	USE-Net: Incorporating Squeeze-and-Excitation blocks into U-Net for prostate zonal segmentation of multi-institutional MRI datasets. 2019 , 365, 31-43	107
1727	A Classify-Before-Detect Method For Weakly Supervised Object Localization. 2019 , 1176, 032003	
1726	Boundary-Aware CNN for Semantic Segmentation. 2019 , 7, 114520-114528	7
1725	Noise Convolutional Neural Networks and FPGA Implementation. 2019 ,	
1724	. 2019 ,	2
1723	Learnable Gated Convolutional Neural Network for Semantic Segmentation in Remote-Sensing Images. 2019 , 11, 1922	18

1722	Below Horizon Aircraft Detection Using Deep Learning for Vision-Based Sense and Avoid. 2019,	6
1721	DermoNet: densely linked convolutional neural network for efficient skin lesion segmentation. 2019, 2019,	17
1720	Attention Based Visual Analysis for Fast Grasp Planning With a Multi-Fingered Robotic Hand. 2019, 13, 60	2
1719	Predicting lung nodule malignancies by combining deep convolutional neural network and handcrafted features. 2019, 64, 175012	25
1718	Concrete crack detection using context-aware deep semantic segmentation network. 2019, 34, 951-971	69
1717	Learning Mutually Local-Global U-Nets For High-Resolution Retinal Lesion Segmentation In Fundus Images. 2019,	15
1716	Artificial Intelligence Assisted Infrastructure Assessment using Mixed Reality Systems. 2019, 2673, 413-424	13
1715	A Hierarchical Urban Forest Index Using Street-Level Imagery and Deep Learning. 2019, 11, 1395	27
1714	Semantic Segmentation of SLAR Imagery with Convolutional LSTM Selectional AutoEncoders. 2019, 11, 1402	15
1713	Newly Built Construction Detection in SAR Images Using Deep Learning. 2019, 11, 1444	19
1712	A human-machine adversarial scoring framework for urban perception assessment using street-view images. 2019, 33, 2363-2384	47
1711	Research and Application of Cell Image Segmentation Based on Generative Adversarial Network. 2019,	
1710	Graph-FCN for Image Semantic Segmentation. 2019, 97-105	20
1709	Boundary Loss for Remote Sensing Imagery Semantic Segmentation. 2019, 388-401	21
1708	The application of convolutional neural network to stem cell biology. 2019, 39, 14	30
1707	MRI Breast Tumor Segmentation Using Different Encoder and Decoder CNN Architectures. 2019, 8, 52	26
1706	Deep Learning for SAR Image Despeckling. 2019, 11, 1532	49
1705	Deep Feature Fusion with Integration of Residual Connection and Attention Model for Classification of VHR Remote Sensing Images. 2019, 11, 1617	21

1704	3D Flow Entropy Contour Fitting Segmentation Algorithm Based on Multi-Scale Transform Contour Constraint. 2019 , 11, 857	1
1703	Robust Inhibition-Augmented Operator for Delineation of Curvilinear Structures. 2019 , 28, 5852-5866	19
1702	Skin Lesion Segmentation in Dermoscopic Images with Combination of YOLO and GrabCut Algorithm. 2019 , 9,	83
1701	LU-NET: An Improved U-Net for Ventricular Segmentation. 2019 , 7, 92539-92546	15
1700	. 2019 , 7, 104011-104024	29
1699	Weakly-Supervised Learning of a Deep Convolutional Neural Networks for Semantic Segmentation. 2019 , 7, 91009-91018	4
1698	Detect Glaucoma with Image Segmentation and Transfer Learning. 2019 ,	
1697	Dual U-Net for the Segmentation of Overlapping Glioma Nuclei. 2019 , 7, 84040-84052	20
1696	Semantic Labeling of Quality Impairments in Speech Spectrograms with Deep Convolutional Networks. 2019 ,	0
1695	Applications of supervised deep learning for seismic interpretation and inversion. 2019 , 38, 526-533	38
1694	Dense In Dense: Training Segmentation from Scratch. 2019 , 454-470	
1693	A SegNet Based Image Enhancement Technique for Air-Tissue Boundary Segmentation in Real-Time Magnetic Resonance Imaging Video. 2019 ,	1
1692	Segmentation of Side Scan Sonar Images on AUV. 2019 ,	2
1691	Fully Automated Segmentation of Lower Extremity Deep Vein Thrombosis Using Convolutional Neural Network. 2019 , 2019, 3401683	5
1690	Cascaded network with deep intensity manipulation for scene understanding. 2019 , 30, e1888	
1689	Multi-level nested pyramid network for mass segmentation in mammograms. 2019 , 363, 313-320	19
1688	Deep Counting Model Extensions with Segmentation for Person Detection. 2019 ,	
1687	Content-sensitive superpixel segmentation via self-organization-map neural network. 2019 , 63, 102572	2

1686	FCSR-GAN: End-to-end Learning for Joint Face Completion and Super-resolution. 2019,	5
1685	MAVNet: An Effective Semantic Segmentation Micro-Network for MAV-Based Tasks. 2019, 4, 3908-3915	13
1684	Automatic Vector-Based Road Structure Mapping Using Multibeam LiDAR. 2019, 11, 1726	5
1683	An Image Forensic Method for AI Inpainting Using Faster R-CNN. 2019, 476-487	1
1682	New image denoising algorithm via improved deep convolutional neural network with perceptive loss. 2019, 138, 112815	22
1681	Perspective-Aware Loss Function for Crowd Density Estimation. 2019,	
1680	Deep Homography Estimation and Its Application to Wall Maps of Wall-Climbing Robots. 2019, 9, 2908	0
1679	Lane Detection Algorithm for Intelligent Vehicles in Complex Road Conditions and Dynamic Environments. 2019, 19,	18
1678	Super-Resolution Integrated Building Semantic Segmentation for Multi-Source Remote Sensing Imagery. 2019, 7, 99381-99397	19
1677	Sclera-Net: Accurate Sclera Segmentation in Various Sensor Images Based on Residual Encoder and Decoder Network. 2019, 7, 98208-98227	11
1676	Scene Parsing Via Dense Recurrent Neural Networks With Attentional Selection. 2019,	2
1675	Development and evaluation of a deep learning model for real-time ground vehicle semantic segmentation from UAV-based thermal infrared imagery. 2019, 155, 172-186	16
1674	AtICNet: semantic segmentation with atrous spatial pyramid pooling in image cascade network. 2019, 2019,	6
1673	Extended Gaze Following: Detecting Objects in Videos Beyond the Camera Field of View. 2019,	9
1672	A neural lens for super-resolution biological imaging. 2019, 3, 065004	13
1671	FaultNet3D: Predicting Fault Probabilities, Strikes, and Dips With a Single Convolutional Neural Network. 2019, 57, 9138-9155	58
1670	Extracting Crop Spatial Distribution from Gaofen 2 Imagery Using a Convolutional Neural Network. 2019, 9, 2917	6
1669	Finer Resolution Mapping of Marine Aquaculture Areas Using WorldView-2 Imagery and a Hierarchical Cascade Convolutional Neural Network. 2019, 11, 1678	13

1668	Semantic Segmentation of Urban Buildings from VHR Remote Sensing Imagery Using a Deep Convolutional Neural Network. 2019 , 11, 1774	86
1667	Facial expression recognition for monitoring neurological disorders based on convolutional neural network. 2019 , 78, 31581-31603	21
1666	Wide context learning network for stereo matching. 2019 , 78, 263-273	5
1665	Moving Object Detection Method via ResNet-18 With EncoderDecoder Structure in Complex Scenes. 2019 , 7, 108152-108160	35
1664	A Review on Deep Learning Techniques for 3D Sensed Data Classification. 2019 , 11, 1499	69
1663	A Dark Target Detection Method Based on the Adjacency Effect: A Case Study on Crack Detection. 2019 , 19,	2
1662	Learning Background Subtraction by Video Synthesis and Multi-scale Recurrent Networks. 2019 , 357-372	2
1661	Model-Based 3D Pose Estimation of a Single RGB Image Using a Deep Viewpoint Classification Neural Network. 2019 , 9, 2478	4
1660	Estimating the occupancy status of parking areas by counting cars and non-empty stalls. 2019 , 62, 234-244	3
1659	Exploring the effect of urban features and immediate environment on body responses. 2019 , 43, 126365	12
1658	Jointly Aligning and Predicting Continuous Emotion Annotations. 2019 , 1-1	5
1657	Sensor Adaptation for Improved Semantic Segmentation of Overhead Imagery. 2019 ,	2
1656	Visual Quality Evaluation for Semantic Segmentation: Subjective Assessment Database and Objective Assessment Measure. 2019 , 28, 5785-5796	3
1655	CONV-codes: Audio Hashing for Bird Species Classification. 2019 ,	1
1654	Multiple Hypothesis Semantic Mapping for Robust Data Association. 2019 , 1-1	6
1653	An End-to-End Conditional Random Fields and Skip-Connected Generative Adversarial Segmentation Network for Remote Sensing Images. 2019 , 11, 1604	9
1652	Deep Depth from Focus. 2019 , 525-541	8
1651	. 2019 ,	0

1650	Automated polyp segmentation for colonoscopy images: A method based on convolutional neural networks and ensemble learning. 2019 , 46, 5666-5676	17
1649	Vision-Based Autonomous Crack Detection of Concrete Structures Using a Fully Convolutional Encoder-Decoder Network. 2019 , 19,	44
1648	Distance transform regression for spatially-aware deep semantic segmentation. 2019 , 189, 102809	13
1647	Region Merging Driven by Deep Learning for RGB-D Segmentation and Labeling. 2019 ,	
1646	CloudFCN: Accurate and Robust Cloud Detection for Satellite Imagery with Deep Learning. 2019 , 11, 2312	31
1645	Constrained fixation point based segmentation via deep neural network. 2019 , 368, 180-187	23
1644	Bringing Lunar LiDAR Back Down to Earth: Mapping Our Industrial Heritage through Deep Transfer Learning. 2019 , 11, 1994	19
1643	Estimation of 2D Velocity Model using Acoustic Signals and Convolutional Neural Networks. 2019 ,	2
1642	Real-Time Hybrid Multi-Sensor Fusion Framework for Perception in Autonomous Vehicles. 2019 , 19,	36
1641	. 2019 , 7, 123453-123462	26
1640	Deep Semantic Segmentation Using Nir as Extra Physical Information. 2019 ,	1
1639	Automatic Motion-Blurred Hand Matting for Human Soft Segmentation in Videos. 2019 ,	1
1638	MLNet: Resource-Efficient Adaptive Inference with Multi-Level Segmentation Networks. 2019 ,	1
1637	Temporal and spatial deep learning network for infrared thermal defect detection. 2019 , 108, 102164	54
1636	. 2019 , 1-1	15
1635	ShapeShifter. 2019 ,	5
1634	A distance map regularized CNN for cardiac cine MR image segmentation. 2019 , 46, 5637-5651	24
1633	Efficiently utilizing complex-valued PolSAR image data via a multi-task deep learning framework. 2019 , 157, 59-72	17

1632	Multitask learning for local seismic image processing: fault detection, structure-oriented smoothing with edge-preserving, and seismic normal estimation by using a single convolutional neural network. 2019 , 219, 2097-2109	33
1631	Automatic Facial Paralysis Evaluation Augmented by a Cascaded Encoder Network Structure. 2019 , 7, 135621-135631	5
1630	SMCA-CNN: Learning a Semantic Mask and Cross-Scale Adaptive Feature for Robust Crowd Counting. 2019 , 7, 168495-168506	1
1629	End-to-End Background Subtraction via a Multi-Scale Spatio-Temporal Model. 2019 , 7, 97949-97958	12
1628	A Bi-Attention Adversarial Network for Prostate Cancer Segmentation. 2019 , 7, 131448-131458	9
1627	High-Resolution Aerial Images Semantic Segmentation Using Deep Fully Convolutional Network With Channel Attention Mechanism. 2019 , 12, 3492-3507	31
1626	Fruit Detection and Segmentation for AppleHarvesting Using Visual Sensor in Orchards. 2019 , 19,	42
1625	Asymmetric Encoder-Decoder Structured FCN Based LiDAR to Color Image Generation. 2019 , 19,	5
1624	SOF-SLAM: A Semantic Visual SLAM for Dynamic Environments. 2019 , 7, 166528-166539	35
1623	DE-Net: Deep Encoding Network for Building Extraction from High-Resolution Remote Sensing Imagery. 2019 , 11, 2380	32
1622	Semantic Segmentation Optimization Algorithm Based on Knowledge Distillation and Model Pruning. 2019 ,	
1621	Spatio-Temporal Neural Network with Dilated Retrospective Convolution for Short-Time Change Detection. 2019 ,	
1620	BraidNet. 2019 ,	20
1619	An open-source project for real-time image semantic segmentation. 2019 , 62, 1	24
1618	Recognition and Application of Infrared Thermal Image Among Power Facilities Based on YOLO. 2019 ,	2
1617	Multi-Grained Cascade AdaBoost Extreme Learning Machine for Feature Representation. 2019 ,	0
1616	Instance Segmentation as Image Segmentation Annotation. 2019 ,	1
1615	Segmentation of Depth Images into Objects Based on Polyhedral Shape Class Model. 2019 ,	1

1614	Spatio-Semantic ConvNet-Based Visual Place Recognition. 2019 ,	12
1613	A Novel Network Based on Densely Connected Fully Convolutional Networks for Segmentation of Lung Tumors on Multi-Modal MR Images. 2019 ,	3
1612	. 2019 ,	2
1611	RootNav 2.0: Deep learning for automatic navigation of complex plant root architectures. 2019 , 8,	38
1610	Deep convolutional neural networks for uncertainty propagation in random fields. 2019 , 34, 1043-1054	9
1609	Deep learning-based accurate and rapid tracking of 3D positional information of microparticles using digital holographic microscopy. 2019 , 60, 1	8
1608	Degradation Mechanism Detection in Photovoltaic Backsheets by Fully Convolutional Neural Network. 2019 , 9, 16119	2
1607	2D Image-To-3D Model: Knowledge-Based 3D Building Reconstruction (3DBR) Using Single Aerial Images and Convolutional Neural Networks (CNNs). 2019 , 11, 2219	25
1606	Road Extraction of High-Resolution Remote Sensing Images Derived from DenseUNet. 2019 , 11, 2499	37
1605	Semantic Segmentation of Marine Radar Images using Convolutional Neural Networks. 2019 ,	3
1604	A range-wide model of contemporary, omnidirectional connectivity for the threatened Mojave desert tortoise. 2019 , 10, e02847	6
1603	Data-efficient deep learning of radiological image data for outcome prediction after endovascular treatment of patients with acute ischemic stroke. 2019 , 115, 103516	28
1602	Nearshore Ship Detection on High-Resolution Remote Sensing Image via Scene-Mask R-CNN. 2019 , 7, 128431-128444	18
1601	Singulation of Objects in Cluttered Environment Using Dynamic Estimation of Physical Properties. 2019 , 9, 3536	4
1600	MCADNNet: Recognizing Stages of Cognitive Impairment through Efficient Convolutional fMRI and MRI Neural Network Topology Models. 2019 , 7, 155584-155600	19
1599	Performance Analysis of Semantic Segmentation Algorithms for Finely Annotated New UAV Aerial Video Dataset (ManipalUAVid). 2019 , 7, 136239-136253	11
1598	A Novel Semantic Segmentation Algorithm Using a Hierarchical Adjacency Dependent Network. 2019 , 7, 150444-150452	
1597	RailNet: A Segmentation Network for Railroad Detection. 2019 , 7, 143772-143779	14

1596	Fruit Localization and Environment Perception for Strawberry Harvesting Robots. 2019 , 7, 147642-147652	24
1595	M-Net: A Novel U-Net With Multi-Stream Feature Fusion and Multi-Scale Dilated Convolutions for Bile Ducts and Hepatolith Segmentation. 2019 , 7, 148645-148657	7
1594	Tonguenet: Accurate Localization and Segmentation for Tongue Images Using Deep Neural Networks. 2019 , 7, 148779-148789	17
1593	Machine Learning for Security and the Internet of Things: The Good, the Bad, and the Ugly. 2019 , 7, 158126-158147	14
1592	Skin lesion segmentation with deep learning. 2019 ,	7
1591	CoralSeg: Learning coral segmentation from sparse annotations. 2019 , 36, 1456-1477	11
1590	Contour-oriented Cropland Extraction from High Resolution Remote Sensing Imagery Using Richer Convolution Features Network. 2019 ,	5
1589	Refined Spatial Network for Human Action Recognition. 2019 , 7, 111043-111052	3
1588	Lednet: A Lightweight Encoder-Decoder Network for Real-Time Semantic Segmentation. 2019 ,	82
1587	Cascade and Fusion of Multitask Convolutional Neural Networks for Detection of Thyroid Nodules in Contrast-Enhanced CT. 2019 , 2019, 7401235	8
1586	An Application of Deep Neural Networks for Segmentation of Microtomographic Images of Rock Samples. 2019 , 8, 72	24
1585	Overview and Empirical Analysis of ISP Parameter Tuning for Visual Perception in Autonomous Driving. 2019 , 5,	8
1584	Web-Net: A Novel Nest Networks with Ultra-Hierarchical Sampling for Building Extraction from Aerial Imageries. 2019 , 11, 1897	25
1583	Deep Residual Autoencoder with Multiscaling for Semantic Segmentation of Land-Use Images. 2019 , 11, 2142	16
1582	Mixed Maximum Loss Design for Optic Disc and Optic Cup Segmentation with Deep Learning from Imbalanced Samples. 2019 , 19,	5
1581	DSM: A Deep Supervised Multi-Scale Network Learning for Skin Cancer Segmentation. 2019 , 7, 140936-140945	16
1580	An LSTM based Encoder-Decoder Model for MultiStep Traffic Flow Prediction. 2019 ,	5
1579	. 2019 ,	3

1578	A Domain Agnostic Normalization Layer for Unsupervised Adversarial Domain Adaptation. 2019 ,	7
1577	TGV Upsampling: A Making-Up Operation for Semantic Segmentation. 2019 , 2019, 8527819	1
1576	Learning to Drive in a Day. 2019 ,	110
1575	A PRELIMINARY VOLUMETRIC MRI STUDY OF AMYGDALA AND HIPPOCAMPAL SUBFIELDS IN AUTISM DURING INFANCY. 2019 , 2019, 1052-1056	2
1574	Semi-Supervised Learning Based on Tri-Training for Gastritis Classification using Gastric X-ray Images. 2019 ,	1
1573	AttentionNet: Learning Where to Focus via Attention Mechanism for Anatomical Segmentation of Whole Breast Ultrasound Images. 2019 ,	3
1572	Bonnet: An Open-Source Training and Deployment Framework for Semantic Segmentation in Robotics using CNNs. 2019 ,	26
1571	A Novel Deep Structure U-Net for Sea-Land Segmentation in Remote Sensing Images. 2019 , 12, 3219-3232	40
1570	Monocular depth estimation with geometrical guidance using a multi-level convolutional neural network. 2019 , 84, 105714	1
1569	Towards a cycling-friendly city: An updated review of the associations between built environment and cycling behaviors (2007-2017). 2019 , 14, 100613	41
1568	W-net: the Convolutional Network for Multi-temporal High-resolution Remote Sensing Image Arable Land Semantic Segmentation. 2019 , 1237, 032067	2
1567	Multi-joint Cooperative Control of Athletes under High Intensity Training. 2019 , 1237, 032077	
1566	Evolution of a Reliable and Extensible High-Level Control System for an Autonomous Car. 2019 , 4, 396-405	3
1565	Segmentation of Building Footprints with Xception and IoUloss. 2019 ,	1
1564	Mask-Guided Style Transfer Network for Purifying Real Images. 2019 ,	
1563	Enhancing V-SLAM Keyframe Selection with an Efficient ConvNet for Semantic Analysis. 2019 ,	2
1562	DFNet: Semantic Segmentation on Panoramic Images with Dynamic Loss Weights and Residual Fusion Block. 2019 ,	10
1561	Evaluation of modified adaptive k-means segmentation algorithm. 2019 , 5, 347-361	19

1560	Off-Grid DOA Estimation for Colocated MIMO Radar via Reduced-Complexity Sparse Bayesian Learning. 2019 , 7, 99907-99916	25
1559	Deep Learning-Based System for Automatic Recognition and Diagnosis of Electrical Insulator Strings. 2019 , 7, 101283-101308	34
1558	Jointly Predicting Future Sequence and Steering Angles for Dynamic Driving Scenes. 2019 ,	3
1557	Hand Component Decomposition for the Hand Gesture Recognition Based on FingerPaint Dataset. 2019 ,	1
1556	Bladder Cancer Multi-Class Segmentation in MRI With Pyramid-In-Pyramid Network. 2019 ,	1
1555	Semantic Segmentation of Aerial Images using FCN-based Network. 2019 ,	1
1554	CloudSegNet: A Deep Network for Nychthemeron Cloud Image Segmentation. 2019 , 16, 1814-1818	24
1553	Immersive Spatial Audio Reproduction for VR/AR Using Room Acoustic Modelling from 360° Images. 2019 ,	9
1552	Enhanced Segmentation-CNN based Finger-Vein Recognition by Joint Training with Automatically Generated and Manual Labels. 2019 ,	6
1551	Detection And Identification Of Lower-Limb Bones In Biplanar X-RAY Images With Arbitrary Field Of View And Various Patient Orientations. 2019 ,	0
1550	Edge-aware Fully Convolutional Network with CRF-RNN Layer for Hippocampus Segmentation. 2019 ,	2
1549	End-to-End Learning of Semantic Grid Estimation Deep Neural Network with Occupancy Grids. 2019 , 07, 171-181	3
1548	Caries Detection with Near-Infrared Transillumination Using Deep Learning. 2019 , 98, 1227-1233	82
1547	LSTM-MA: A LSTM Method with Multi-Modality and Adjacency Constraint for Brain Image Segmentation. 2019 ,	6
1546	Removing segmentation inconsistencies with semi-supervised non-adjacency constraint. 2019 , 58, 101551	10
1545	DMS-SLAM: A General Visual SLAM System for Dynamic Scenes with Multiple Sensors. 2019 , 19,	11
1544	Lung segmentation method with dilated convolution based on VGG-16 network. 2019 , 24, 27-33	23
1543	Classifying Pedestrian Actions In Advance Using Predicted Video Of Urban Driving Scenes. 2019 ,	14

1542	Land Cover Maps Production with High Resolution Satellite Image Time Series and Convolutional Neural Networks: Adaptations and Limits for Operational Systems. 2019 , 11, 1986	54
1541	Automatically Extract Semi-Transparent Motion-Blurred Hand From a Single Image. 2019 , 26, 1598-1602	1
1540	SegFast-V2: Semantic image segmentation with less parameters in deep learning for autonomous driving. 2019 , 10, 3145-3154	22
1539	A Roadmap for Automatic Surgical Site Infection Detection and Evaluation Using User-Generated Incision Images. 2019 , 20, 555-565	6
1538	. 2019 ,	4
1537	Fast Instance and Semantic Segmentation Exploiting Local Connectivity, Metric Learning, and One-Shot Detection for Robotics. 2019 ,	2
1536	Vehicle Detection based on Deep Learning Heatmap Estimation. 2019 ,	0
1535	Classification of alveolar bone density using 3-D deep convolutional neural network in the cone-beam CT images: A 6-month clinical study. 2019 , 148, 106945	5
1534	SPHERICAL U-NET FOR INFANT CORTICAL SURFACE PARCELLATION. 2019 , 2019, 1882-1886	4
1533	A Novel Hyperspectral Image Classification Pattern Using Random Patches Convolution and Local Covariance. 2019 , 11, 1954	5
1532	TongueNet: A Precise and Fast Tongue Segmentation System Using U-Net with a Morphological Processing Layer. 2019 , 9, 3128	14
1531	Deep learning-based visual recognition of rumex for robotic precision farming. 2019 , 165, 104973	25
1530	SUMNet: Fully Convolutional Model For Fast Segmentation of Anatomical Structures in Ultrasound Volumes. 2019 ,	9
1529	Understanding Deep Learning Techniques for Image Segmentation. 2019 , 52, 1-35	93
1528	First-arrival picking with a U-net convolutional network. 2019 , 84, U45-U57	27
1527	Prediction of Multiple 3D Tissue Structures Based on Single-Marker Images Using Convolutional Neural Networks. 2019 ,	
1526	A Survey of Deep-Learning Applications in Ultrasound: Artificial Intelligence-Powered Ultrasound for Improving Clinical Workflow. 2019 , 16, 1318-1328	63
1525	. 2019 , 7, 128774-128786	44

1524	A Review of Enhancement and Segmentation Techniques for Digital Images. 2019 , 19, 1950013	5
1523	A Wavelet approach to extract main features from indirect immunofluorescence images. 2019 ,	
1522	SaltSeg: Automatic 3D salt segmentation using a deep convolutional neural network. 2019 , 7, SE113-SE122	56
1521	Development and Research of Hand Segmentation Algorithms on the Image Based on Convolutional Neural Networks. 2019 , 150, 450-454	2
1520	Binary-Patterns Based Floor Recognition Suitable for Urban Scenes. 2019 ,	2
1519	FCA-Net: Adversarial Learning for Skin Lesion Segmentation Based on Multi-Scale Features and Factorized Channel Attention. 2019 , 7, 130552-130565	19
1518	A Deep One-Class Neural Network for Anomalous Event Detection in Complex Scenes. 2020 , 31, 2609-2622	25
1517	Iterative Dataset Filtering for Weakly Supervised Segmentation of Depth Images. 2019 ,	1
1516	Semantic Segmentation on Automotive Radar Maps. 2019 ,	8
1515	The visual quality of streets: A human-centred continuous measurement based on machine learning algorithms and street view images. 2019 , 46, 1439-1457	43
1514	Novel data augmentation strategies to boost supervised segmentation of plant disease. 2019 , 165, 104967	24
1513	Esnet: Edge-Based Segmentation Network for Real-Time Semantic Segmentation in Traffic Scenes. 2019 ,	7
1512	Aiding the Diagnosis of Diabetic and Hypertensive Retinopathy Using Artificial Intelligence-Based Semantic Segmentation. 2019 , 8,	30
1511	Automatic choroidal segmentation in OCT images using supervised deep learning methods. 2019 , 9, 13298	47
1510	Segmenting Hepatic Lesions Using Residual Attention U-Net with an Adaptive Weighted Dice Loss. 2019 ,	10
1509	Hover-Net: Simultaneous segmentation and classification of nuclei in multi-tissue histology images. 2019 , 58, 101563	158
1508	Building and exploring libraries of atomic defects in graphene: Scanning transmission electron and scanning tunneling microscopy study. 2019 , 5, eaaw8989	41
1507	Movie scene segmentation using object detection and set theory. 2019 , 15, 155014771984527	11

1506	Learning Cartographic Building Generalization with Deep Convolutional Neural Networks. 2019 , 8, 258	25
1505	Automatic classification of skin burn colour images using texture-based feature extraction. 2019 , 13, 2018-2028	14
1504	Attention-Based DenseUnet Network With Adversarial Training for Skin Lesion Segmentation. 2019 , 7, 136616-136629	20
1503	Attentional Information Fusion Networks for Cross-Scene Power Line Detection. 2019 , 16, 1635-1639	11
1502	Computer Aided Annotation of Early Esophageal Cancer in Gastroscopic Images based on Deeplabv3+ Network. 2019 ,	2
1501	Physical model of scour at the toe of rock armoured structures. 2019 , 154, 103572	2
1500	Context pyramidal network for stereo matching regularized by disparity gradients. 2019 , 157, 201-215	9
1499	. 2019 , 7, 142053-142069	25
1498	Using Deep Learning and Satellite Imagery to Assess the Damage to Civil Structures After Natural Disasters. 2019 ,	1
1497	Video Foreground Extraction Using Multi-View Receptive Field and EncoderDecoder DCNN for Traffic and Surveillance Applications. 2019 , 68, 9478-9493	33
1496	Regularization strategies for deep-learning-based salt model building. 2019 , 7, T911-T922	4
1495	Weakly Supervised Semantic Segmentation of Satellite Images. 2019 ,	12
1494	Optic Disc and Cup Segmentation Based on Enhanced SegNet. 2019 ,	1
1493	What Data are needed for Semantic Segmentation in Earth Observation?. 2019 ,	2
1492	Automatic pixel-level multiple damage detection of concrete structure using fully convolutional network. 2019 , 34, 616-634	144
1491	Automatic Building Extraction from Google Earth Images under Complex Backgrounds Based on Deep Instance Segmentation Network. 2019 , 19,	27
1490	Studying the plasticity in deep convolutional neural networks using random pruning. 2019 , 30, 203-216	11
1489	Pixel Transposed Convolutional Networks. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2020 , 42, 1218-1227	13.3 12

1488	Hybrid LSTM and Encoder-Decoder Architecture for Detection of Image Forgeries. 2019 , 28, 3286-3300	105
1487	The Second Workshop on 3D Reconstruction Meets Semantics: Challenge Results Discussion. 2019 , 631-644	1
1486	Fast Semantic Segmentation on Video Using Block Motion-Based Feature Interpolation. 2019 , 3-6	1
1485	Fusion of Multiscale Convolutional Neural Networks for Building Extraction in Very High-Resolution Images. 2019 , 11, 227	41
1484	Bayesian Polytrees With Learned Deep Features for Multi-Class Cell Segmentation. 2019 , 28, 3246-3260	11
1483	Initial Experiences with Artificial Neural Networks in the Detection of Computed Tomography Perfusion Deficits. 2018 ,	10
1482	Effective use of convolutional neural networks and diverse deep supervision for better crowd counting. 2019 , 49, 2415-2433	11
1481	In-process virtual verification of weld seam removal in robotic abrasive belt grinding process using deep learning. 2019 , 57, 477-487	31
1480	A Deep Feature Extraction Method for HEp-2 Cell Image Classification. 2019 , 8, 20	16
1479	Outdoor Semantic Segmentation for UGVs Based on CNN and Fully Connected CRFs. 2019 , 19, 4290-4298	3
1478	Improving Sensitivity on Identification and Delineation of Intracranial Hemorrhage Lesion Using Cascaded Deep Learning Models. 2019 , 32, 450-461	46
1477	Guava Detection and Pose Estimation Using a Low-Cost RGB-D Sensor in the Field. 2019 , 19,	58
1476	Instance invariant visual servoing framework for part-aware autonomous vehicle inspection using MAVs. 2019 , 36, 892-918	1
1475	A Context-Aware Capsule Network for Multi-label Classification. 2019 , 546-554	2
1474	A Survey on optimized implementation of deep learning models on the NVIDIA Jetson platform. 2019 , 97, 428-442	88
1473	High-Performance Detection of Concealed Forbidden Objects on Human Body with Deep Neural Networks Based on Passive Millimeter Wave and Visible Imagery. 2019 , 40, 314-347	13
1472	. 2019 , 39, 26-55	24
1471	Traffic Light Recognition Based on Binary Semantic Segmentation Network. 2019 , 19,	5

1470	Autonomous Visual Perception for Unmanned Surface Vehicle Navigation in an Unknown Environment. 2019 , 19,	17
1469	Region-based active learning for efficient labeling in semantic segmentation. 2019 ,	11
1468	Fully Convolutional Neural Network with Augmented Atrous Spatial Pyramid Pool and Fully Connected Fusion Path for High Resolution Remote Sensing Image Segmentation. 2019 , 9, 1816	34
1467	FMnet: Iris Segmentation and Recognition by Using Fully and Multi-Scale CNN for Biometric Security. 2019 , 9, 2042	11
1466	Water Body Extraction from Very High Spatial Resolution Remote Sensing Data Based on Fully Convolutional Networks. 2019 , 11, 1162	37
1465	Deep smoke segmentation. 2019 , 357, 248-260	31
1464	A cloud detection algorithm for satellite imagery based on deep learning. 2019 , 229, 247-259	127
1463	DOOBNet: Deep Object Occlusion Boundary Detection from an Image. 2019 , 686-702	3
1462	Depth Embedded Recurrent Predictive Parsing Network for Video Scenes. 2019 , 20, 4643-4654	10
1461	Do street-level scene perceptions affect housing prices in Chinese megacities? An analysis using open access datasets and deep learning. 2019 , 14, e0217505	25
1460	A Convolutional Encoder-Decoder Network With Skip Connections for Saliency Prediction. 2019 , 7, 60428-60438	
1459	Human Activity Recognition Based on Motion Sensor Using U-Net. 2019 , 7, 75213-75226	30
1458	U-Net Plus: Deep Semantic Segmentation for Esophagus and Esophageal Cancer in Computed Tomography Images. 2019 , 7, 82867-82877	16
1457	Paraspinal Muscle Segmentation Based on Deep Neural Network. 2019 , 19,	11
1456	Deep learning approaches using 2D and 3D convolutional neural networks for generating male pelvic synthetic computed tomography from magnetic resonance imaging. 2019 , 46, 3788-3798	41
1455	Methods of Mobile Robot Visual Navigation and Environment Mapping. 2019 , 55, 181-188	4
1454	WAILS: Watershed Algorithm With Image-Level Supervision for Weakly Supervised Semantic Segmentation. 2019 , 7, 42745-42756	5
1453	Endometrium segmentation on transvaginal ultrasound image using key-point discriminator. 2019 , 46, 3974-3984	9

1452	Delineation of agricultural fields in smallholder farms from satellite images using fully convolutional networks and combinatorial grouping. 2019 , 231, 111253	52
1451	Robust and real-time lane detection filter based on adaptive neuro-fuzzy inference system. 2019 , 13, 1181-1190	1
1450	Memory Segment Matching Network Based Image Geo-Localization. 2019 , 7, 77448-77459	2
1449	Automatic segmentation of the mandible from computed tomography scans for 3D virtual surgical planning using the convolutional neural network. 2019 , 64, 175020	24
1448	Segmentation and suppression of pulmonary vessels in low-dose chest CT scans. 2019 , 46, 3603-3614	6
1447	Machine-based understanding of manually collected visual and auditory datasets for urban perception studies. 2019 , 190, 103604	5
1446	Improving public data for building segmentation from Convolutional Neural Networks (CNNs) for fused airborne lidar and image data using active contours. 2019 , 154, 70-83	35
1445	Unsupervised Domain Adaptation Using Generative Adversarial Networks for Semantic Segmentation of Aerial Images. 2019 , 11, 1369	82
1444	Image-based concrete crack assessment using mask and region-based convolutional neural network. 2019 , 26, e2381	56
1443	A pose estimation system based on deep neural network and ICP registration for robotic spray painting application. 2019 , 104, 285-299	12
1442	Atom-by-atom fabrication with electron beams. 2019 , 4, 497-507	42
1441	Spherical U-Net on Cortical Surfaces: Methods and Applications. 2019 , 11492, 855-866	22
1440	DD-CycleGAN: Unpaired image dehazing via Double-Discriminator Cycle-Consistent Generative Adversarial Network. 2019 , 82, 263-271	14
1439	Flex-Convolution. 2019 , 105-122	6
1438	. 2019 , 7, 64517-64532	10
1437	Cardiac-DeepIED: Automatic Pixel-Level Deep Segmentation for Cardiac Bi-Ventricle Using Improved End-to-End Encoder-Decoder Network. 2019 , 7, 1900110	22
1436	Developing a seismic texture analysis neural network for machine-aided seismic pattern recognition and classification. 2019 , 218, 1262-1275	26
1435	Accurate Gastric Cancer Segmentation in Digital Pathology Images Using Deformable Convolution and Multi-Scale Embedding Networks. 2019 , 7, 75530-75541	22

1434	Improved cGAN based linear lesion segmentation in high myopia ICGA images. 2019 , 10, 2355-2366	9
1433	Building Extraction from High-Resolution Aerial Imagery Using a Generative Adversarial Network with Spatial and Channel Attention Mechanisms. 2019 , 11, 917	63
1432	A multiscale neural network based on hierarchical nested bases. 2019 , 6, 1	10
1431	An Efficient Solution for Semantic Segmentation: ShuffleNet V2 with Atrous Separable Convolutions. 2019 , 41-53	5
1430	Cascaded CNN for Real-time Tongue Segmentation Based on Key Points Localization. 2019 ,	3
1429	A Novel Octree-Based 3-D Fully Convolutional Neural Network for Point Cloud Classification in Road Environment. 2019 , 57, 7799-7818	8
1428	Deep Object Co-segmentation. 2019 , 638-653	7
1427	Pathology Image Analysis Using Segmentation Deep Learning Algorithms. 2019 , 189, 1686-1698	93
1426	Semantic Segmentation with Transfer Learning for Off-Road Autonomous Driving. 2019 , 19,	25
1425	Computer image analysis for intramuscular fat segmentation in dry-cured ham slices using convolutional neural networks. 2019 , 106, 106693	9
1424	Semantic Segmentation of Remote Sensing Images Using Multiscale Decoding Network. 2019 , 16, 1492-1496	14
1423	Model Fusion for Building Type Classification from Aerial and Street View Images. 2019 , 11, 1259	29
1422	A Computationally Efficient Semantic SLAM Solution for Dynamic Scenes. 2019 , 11, 1363	14
1421	Learning motion field of LiDAR point cloud with convolutional networks. 2019 , 125, 514-520	5
1420	Automated Vision-Based High Intraocular Pressure Detection Using Frontal Eye Images. 2019 , 7, 3800113	6
1419	A Systematic Measurement of Street Quality through Multi-Sourced Urban Data: A Human-Oriented Analysis. 2019 , 16,	21
1418	Hyperfusion-Net: Hyper-densely reflective feature fusion for salient object detection. 2019 , 93, 521-533	33
1417	Uncovering Ecological Patterns with Convolutional Neural Networks. 2019 , 34, 734-745	55

1416	Automated brain tumor segmentation on multi-modal MR image using SegNet. 2019 , 5, 209-219	48
1415	Automated content-based filtering for enhanced vision-based documentation in construction toward exploiting big visual data from drones. 2019 , 105, 102831	25
1414	. 2019 , 7, 86979-86988	3
1413	A Novel Spatio-Temporal FCN-LSTM Network for Recognizing Various Crop Types Using Multi-Temporal Radar Images. 2019 , 11, 990	38
1412	Learning On-Road Visual Control for Self-Driving Vehicles With Auxiliary Tasks. 2019 ,	6
1411	Online Hard Region Mining for Semantic Segmentation. 2019 , 50, 2665-2679	3
1410	A deep-learning-based approach for fast and robust steel surface defects classification. 2019 , 121, 397-405	72
1409	An adaptable approach to automated visual detection of plant organs with applications in grapevine breeding. 2019 , 183, 170-183	22
1408	Quality-aware dual-modal saliency detection via deep reinforcement learning. 2019 , 75, 158-167	5
1407	Attention-based Atrous Convolutional Neural Networks: Visualisation and Understanding Perspectives of Acoustic Scenes. 2019 ,	20
1406	Combo loss: Handling input and output imbalance in multi-organ segmentation. 2019 , 75, 24-33	74
1405	Dense Convolutional Networks for Semantic Segmentation. 2019 , 7, 43369-43382	21
1404	Road Detection and Centerline Extraction Via Deep Recurrent Convolutional Neural Network U-Net. 2019 , 57, 7209-7220	80
1403	Recognizing road from satellite images by structured neural network. 2019 , 356, 131-141	7
1402	Automated segmentation of macular edema in OCT using deep neural networks. 2019 , 55, 216-227	26
1401	Filter-Wise Pruning Approach to FPGA Implementation of Fully Convolutional Network for Semantic Segmentation. 2019 , 371-386	6
1400	Deep learning-based carotid media-adventitia and lumen-intima boundary segmentation from three-dimensional ultrasound images. 2019 , 46, 3180-3193	42
1399	. 2019 , 7, 43487-43501	21

1398	Evaluation of Diffusion Lesion Volume Measurements in Acute Ischemic Stroke Using Encoder-Decoder Convolutional Network. 2019 , 50, 1444-1451	20
1397	Two-Level Attentions and Grouping Attention Convolutional Network for Fine-Grained Image Classification. 2019 , 9, 1939	11
1396	Regularized Auto-Encoder-Based Separation of Defects from Backgrounds for Inspecting Display Devices. 2019 , 8, 533	5
1395	Classification of 3D Digital Heritage. 2019 , 11, 847	44
1394	Road Extraction by Using Atrous Spatial Pyramid Pooling Integrated Encoder-Decoder Network and Structural Similarity Loss. 2019 , 11, 1015	62
1393	Fig Plant Segmentation from Aerial Images Using a Deep Convolutional Encoder-Decoder Network. 2019 , 11, 1157	21
1392	Context Aggregation Network for Semantic Labeling in Aerial Images. 2019 , 11, 1158	21
1391	Depth Estimation and Semantic Segmentation from a Single RGB Image Using a Hybrid Convolutional Neural Network. 2019 , 19,	11
1390	Evaluation of the Potential of Convolutional Neural Networks and Random Forests for Multi-Class Segmentation of Sentinel-2 Imagery. 2019 , 11, 907	17
1389	Efficient multi-kernel DCNN with pixel dropout for stroke MRI segmentation. 2019 , 350, 117-127	20
1388	Deep learning and radiomics in precision medicine. 2019 , 4, 59-72	81
1387	Convolutional Edge Constraint-Based U-Net for Salient Object Detection. 2019 , 7, 48890-48900	19
1386	DSNET: Accelerate Indoor Scene Semantic Segmentation. 2019 ,	1
1385	. 2019 , 12, 2612-2626	48
1384	Automotive radar and camera fusion using Generative Adversarial Networks. 2019 , 184, 1-8	33
1383	Use of Crowd Innovation to Develop an Artificial Intelligence-Based Solution for Radiation Therapy Targeting. 2019 , 5, 654-661	38
1382	Research on Multi-module Feature Fusion of Putonghua Based on Genetic Algorithm. 2019 ,	
1381	Fully convolutional network for rice seedling and weed image segmentation at the seedling stage in paddy fields. 2019 , 14, e0215676	38

1380	Learn to segment single cells with deep distance estimator and deep cell detector. 2019 , 108, 133-141	32
1379	RTFNet: RGB-Thermal Fusion Network for Semantic Segmentation of Urban Scenes. 2019 , 4, 2576-2583	85
1378	Coarse-to-fine road scene segmentation via hierarchical graphical models. 2019 , 16, 172988141983116	
1377	Parts Semantic Segmentation Aware Representation Learning for Person Re-Identification. 2019 , 9, 1239	4
1376	LNSNet: Lightweight Navigable Space Segmentation for Autonomous Robots on Construction Sites. 2019 , 4, 40	3
1375	RGB-D-Based Pose Estimation of Workpieces with Semantic Segmentation and Point Cloud Registration. 2019 , 19,	12
1374	ECNet: Efficient Convolutional Networks for Side Scan Sonar Image Segmentation. 2019 , 19,	15
1373	Daily Accessed Street Greenery and Housing Price: Measuring Economic Performance of Human-Scale Streetscapes via New Urban Data. 2019 , 11, 1741	23
1372	Rethinking labelling in road segmentation. 2019 , 40, 8359-8378	2
1371	Deep learning electromagnetic inversion with convolutional neural networks. 2019 , 218, 817-832	83
1370	Segmentation of Vehicles and Roads by a Low-Channel Lidar. 2019 , 20, 4251-4256	12
1369	Automatic segmentation of Sperm's parts in microscopic images of human semen smears using concatenated learning approaches. 2019 , 109, 242-253	7
1368	A New CNN-Bayesian Model for Extracting Improved Winter Wheat Spatial Distribution from GF-2 imagery. 2019 , 11, 619	5
1367	JointNet: A Common Neural Network for Road and Building Extraction. 2019 , 11, 696	49
1366	Feature Fusion With Predictive Weighting for Spectral Image Classification and Segmentation. 2019 , 57, 6792-6807	11
1365	An Improved Air Tissue Boundary Segmentation Technique for Real Time Magnetic Resonance Imaging Video Using Segnet. 2019 ,	5
1364	End-to-End DSM Fusion Networks for Semantic Segmentation in High-Resolution Aerial Images. 2019 , 16, 1766-1770	26
1363	Image Shadow Removal Using End-to-End Deep Convolutional Neural Networks. 2019 , 9, 1009	6

1362	Building Footprint Extraction from High-Resolution Images via Spatial Residual Inception Convolutional Neural Network. 2019 , 11, 830	92
1361	Accurate traffic light detection using deep neural network with focal regression loss. 2019 , 87, 24-36	11
1360	Methods for Segmentation and Classification of Digital Microscopy Tissue Images. 2019 , 7, 53	74
1359	High Efficiency Video Coding (HEVC)-Based Surgical Telementoring System Using Shallow Convolutional Neural Network. 2019 , 32, 1027-1043	12
1358	PortraitNet: Real-time portrait segmentation network for mobile device. 2019 , 80, 104-113	16
1357	Deep Q Learning Driven CT Pancreas Segmentation With Geometry-Aware U-Net. 2019 , 38, 1971-1980	55
1356	StressedNets: Efficient feature representations via stress-induced evolutionary synthesis of deep neural networks. 2019 , 352, 93-105	4
1355	CAN: Contextual Aggregating Network for Semantic Segmentation. 2019 ,	8
1354	Weakly Supervised Adversarial Domain Adaptation for Semantic Segmentation in Urban Scenes. 2019 , 28, 4376-4386	122
1353	Machine learning in a data-limited regime: Augmenting experiments with synthetic data uncovers order in crumpled sheets. 2019 , 5, eaau6792	19
1352	How can Big Data and machine learning benefit environment and water management: a survey of methods, applications, and future directions. 2019 , 14, 073001	98
1351	TB-Places: A Data Set for Visual Place Recognition in Garden Environments. 2019 , 7, 52277-52287	9
1350	Fabric Image Retrieval System Using Hierarchical Search Based on Deep Convolutional Neural Network. 2019 , 7, 35405-35417	24
1349	Adversarial Learning for Constrained Image Splicing Detection and Localization Based on Atrous Convolution. 2019 , 14, 2551-2566	33
1348	Road Edge Detection in All Weather and Illumination via Driving Video Mining. 2019 , 4, 232-243	7
1347	Fast 3D Semantic Mapping in Road Scenes. 2019 , 9, 631	3
1346	Shadow Detection in Single RGB Images Using a Context Preserver Convolutional Neural Network Trained by Multiple Adversarial Examples. 2019 ,	11
1345	Brain-Inspired Robust Delineation Operator. 2019 , 555-565	3

1344	Cloud and cloud shadow detection in Landsat imagery based on deep convolutional neural networks. 2019 , 225, 307-316	98
1343	Robust segmentation of arterial walls in intravascular ultrasound images using Dual Path U-Net. 2019 , 96, 24-33	44
1342	Automatic detection of passable roads after floods in remote sensed and social media data. 2019 , 74, 110-118	22
1341	Deep learning based cloud detection for medium and high resolution remote sensing images of different sensors. 2019 , 150, 197-212	122
1340	High Throughput Quantitative Metallography for Complex Microstructures Using Deep Learning: A Case Study in Ultrahigh Carbon Steel. 2019 , 25, 21-29	75
1339	Generative adversarial framework for depth filling via Wasserstein metric, cosine transform and domain transfer. 2019 , 91, 232-244	16
1338	Edge gradient feature and long distance dependency for image semantic segmentation. 2019 , 13, 53-60	4
1337	DeepHESC 2.0: Deep Generative Multi Adversarial Networks for improving the classification of hESC. 2019 , 14, e0212849	5
1336	Exploring Deep-Based Approaches for Semantic Segmentation of Mammographic Images. 2019 , 690-698	2
1335	Fault Diagnosis of Rotating Machinery under Noisy Environment Conditions Based on a 1-D Convolutional Autoencoder and 1-D Convolutional Neural Network. 2019 , 19,	34
1334	Encoder-decoder network for pixel-level road crack detection in black-box images. 2019 , 34, 713-727	151
1333	Real-time tumor tracking using fluoroscopic imaging with deep neural network analysis. 2019 , 59, 22-29	17
1332	Brain Tumor Segmentation Using Bit-plane and UNET. 2019 , 466-475	7
1331	Local Deep Descriptor for Remote Sensing Image Feature Matching. 2019 , 11, 430	15
1330	Automatic building extraction from high-resolution aerial images and LiDAR data using gated residual refinement network. 2019 , 151, 91-105	100
1329	Real-time gesture recognition based on feature recalibration network with multi-scale information. 2019 , 347, 119-130	7
1328	Bayesian QuickNAT: Model uncertainty in deep whole-brain segmentation for structure-wise quality control. 2019 , 195, 11-22	41
1327	Random Forest with Learned Representations for Semantic Segmentation. 2019 ,	13

1326	A Novel Object-Based Deep Learning Framework for Semantic Segmentation of Very High-Resolution Remote Sensing Data: Comparison with Convolutional and Fully Convolutional Networks. 2019 , 11, 684	27
1325	Background Subtraction With Real-Time Semantic Segmentation. 2019 , 7, 153869-153884	20
1324	A Framework for Large-Scale Analysis of Video "in the Wild" to Assist Digital Forensic Examination. 2019 , 17, 23-33	3
1323	Segmentation of deformed kidneys and nephroblastoma using Case-Based Reasoning and Convolutional Neural Network. 2019 , 127, 282-294	16
1322	MR-based treatment planning in radiation therapy using a deep learning approach. 2019 , 20, 105-114	28
1321	Comprehensive features with randomized decision forests for hand segmentation from color images in uncontrolled indoor scenarios. 2019 , 78, 20987-21020	1
1320	Fully Convolutional Networks and Geographic Object-Based Image Analysis for the Classification of VHR Imagery. 2019 , 11, 597	31
1319	Deep Convolutional Encoder-Decoder Networks for Uncertainty Quantification of Dynamic Multiphase Flow in Heterogeneous Media. 2019 , 55, 703-728	99
1318	ThunderNet: A Turbo Unified Network for Real-Time Semantic Segmentation. 2019 ,	13
1317	Video deblurring via motion compensation and adaptive information fusion. 2019 , 341, 88-98	9
1316	Advances in Computer Vision-Based Civil Infrastructure Inspection and Monitoring. 2019 , 5, 199-222	251
1315	Preliminary establishment and analysis of automated driving benchmark in China. 2019 , 259, 02002	
1314	Evaluating CNN-Based Semantic Food Segmentation Across Illuminants. 2019 , 247-259	7
1313	Multi-scale Autoencoders in Autoencoder for Semantic Image Segmentation. 2019 , 587-599	3
1312	Magic-Wall: Visualizing Room Decoration by Enhanced Wall Segmentation. 2019 , 28, 4219-4232	2
1311	Focus Measure for Synthetic Aperture Imaging Using a Deep Convolutional Network. 2019 , 7, 19762-19774	3
1310	Automated segmentation of 2D low-dose CT images of the psoas-major muscle using deep convolutional neural networks. 2019 , 12, 210-215	25
1309	Robust mouse tracking in complex environments using neural networks. 2019 , 2, 124	20

1308	. 2019 , 57, 6195-6211	70
1307	Hyperspectral imagery classification based on semi-supervised 3-D deep neural network and adaptive band selection. 2019 , 129, 246-259	63
1306	Deep Convolutional Neural Network for Flood Extent Mapping Using Unmanned Aerial Vehicles Data. 2019 , 19,	73
1305	Robust graticule intersection localization for rotated topographic maps. 2019 , 30, 737-747	0
1304	Deep built-structure counting in satellite imagery using attention based re-weighting. 2019 , 151, 313-321	7
1303	Deep convolutional neural networks with multiplane consensus labeling for lung function quantification using UTE proton MRI. 2019 , 50, 1169-1181	9
1302	Vehicle Categorical Recognition for Traffic Monitoring in Intelligent Transportation Systems. 2019 , 670-679	0
1301	A coarse-to-fine deep learning framework for optic disc segmentation in fundus images. 2019 , 51, 82-89	42
1300	Beyond Supervised Learning: A Computer Vision Perspective. 2019 , 99, 177-199	6
1299	Joint Learning of Degradation Assessment and RUL Prediction for Aeroengines via Dual-Task Deep LSTM Networks. 2019 , 15, 5023-5032	90
1298	Learning to Predict Ego-Vehicle Poses for Sampling-Based Nonholonomic Motion Planning. 2019 , 4, 1053-1060	9
1297	Anomaly Detection and Segmentation for Wafer Defect Patterns Using Deep Convolutional Encoder-Decoder Neural Network Architectures in Semiconductor Manufacturing. 2019 , 32, 250-256	43
1296	Credit spread approximation and improvement using random forest regression. 2019 , 277, 351-365	20
1295	DRE-SLAM: Dynamic RGB-D Encoder SLAM for a Differential-Drive Robot. 2019 , 11, 380	21
1294	Artificial intelligence in neuropathology: deep learning-based assessment of tauopathy. 2019 , 99, 1019-1029	42
1293	Automated pectoral muscle identification on MLO-view mammograms: Comparison of deep neural network to conventional computer vision. 2019 , 46, 2103-2114	6
1292	Unsupervised Orthogonal Facial Representation Extraction via image reconstruction with correlation minimization. 2019 , 337, 203-217	3
1291	Computer-Aided Segmentation of Liver Lesions in CT Scans Using Cascaded Convolutional Neural Networks and Genetically Optimised Classifier. 2019 , 44, 4049-4062	21

1290	A review on lung boundary detection in chest X-rays. 2019 , 14, 563-576	50
1289	Optic disc segmentation in fundus images using adversarial training. 2019 , 13, 375-381	8
1288	Multi-Pig Part Detection and Association with a Fully-Convolutional Network. 2019 , 19,	31
1287	A 2.5D Deep Learning-Based Approach for Prostate Cancer Detection on T2-Weighted Magnetic Resonance Imaging. 2019 , 734-739	1
1286	Unsupervised segmentation of multiview feature semantics by hashing model. 2019 , 160, 106-112	
1285	Tensor Decomposition for Colour Image Segmentation of Burn Wounds. 2019 , 9, 3291	11
1284	FaultSeg3D: Using synthetic data sets to train an end-to-end convolutional neural network for 3D seismic fault segmentation. 2019 , 84, IM35-IM45	251
1283	Multipath Densely Connected Convolutional Neural Network for Brain Tumor Segmentation. 2019 , 81-91	1
1282	BCR-Net: A neural network based on the nonstandard wavelet form. 2019 , 384, 1-15	13
1281	Automatic segmentation of left ventricle from cardiac MRI via deep learning and region constrained dynamic programming. 2019 , 347, 139-148	20
1280	Stacked U-shape networks with channel-wise attention for image super-resolution. 2019 , 345, 58-66	14
1279	Recurrently exploring class-wise attention in a hybrid convolutional and bidirectional LSTM network for multi-label aerial image classification. 2019 , 149, 188-199	70
1278	Body-Boundary-Refined Human Parsing Network based on Fully Convolutional Network and Conditional Random Fields. 2019 , 646, 012028	
1277	Convolutional network-based method for wall-climbing robot direction angle measurement. 2019 , 46, 863-869	
1276	A novel convolutional neural network with high convergence rate: Application to CT synthesis from MR images. 2019 ,	2
1275	Using a Prior Knowledge to Improve Scene Understanding. 2019 ,	2
1274	IsMo-GAN: Adversarial Learning for Monocular Non-Rigid 3D Reconstruction. 2019 ,	10
1273	. 2019 ,	60

1272	. 2019,	0
1271	CNN based Multi-View Object Detection and Association. 2019,	
1270	Low- and High-level Methods for Tree Segmentation. 2019,	1
1269	Spatial Sampling Network for Fast Scene Understanding. 2019,	8
1268	Remote sensing semantic segmentation with convolution neural network using attention mechanism. 2019,	1
1267	A two-dimensional material recognition image algorithm based on deep learning. 2019,	1
1266	First-break automatic picking with fully convolutional networks and transfer learning. 2019,	1
1265	Capturing the spatio-temporal continuity for video semantic segmentation. 2019, 13, 2813-2820	2
1264	Multi-Object Portion Tracking in 4D Fluorescence Microscopy Imagery with Deep Feature Maps. 2019, 2019, 1087-1096	0
1263	Towards Bridging Semantic Gap to Improve Semantic Segmentation. 2019,	37
1262	Associative Embedding for Team Discrimination. 2019,	3
1261	Probabilistic 3D Semantic Map Fusion Based on Bayesian Rule. 2019,	1
1260	Optimizing FPGA-based Convolutional Encoder-Decoder Architecture for Semantic Segmentation. 2019,	1
1259	FaultNet: A deep CNN model for 3D automated fault picking. 2019,	8
1258	Real-Time Dense Semantic Labeling with Dual-Path Framework for High-Resolution Remote Sensing Image. 2019, 11, 3020	9
1257	Gaze-angle Impact on Iris Segmentation using CNNs. 2019,	1
1256	. 2019,	0
1255	Research on Crop Planting Area Classification From Remote Sensing Image Based on Deep Learning. 2019,	2

1254	A Generalized Densely Connected Encoder-Decoder Network for epithelial and stromal regions segmentation in histopathological images. 2019,	1
1253	Building realistic structure models to train convolutional neural networks for seismic structural interpretation. 2019,	1
1252	Radar Target Detection using Convolutional Neutral Network in Clutter. 2019,	1
1251	Unconstrained Thermal Hand Segmentation. 2019,	
1250	Point Clouds Learning Using Directed Connected Graph. 2019,	
1249	Generative Networks for Adversarial Examples with Weighted Perturbations. 2019,	
1248	Automatic Fundus Image Segmentation for Diabetic Retinopathy Diagnosis by Multiple Modified U-Nets and SegNets. 2019,	1
1247	Automatic Tongue Image Segmentation For Real-Time Remote Diagnosis. 2019,	7
1246	A Fine-Grained Fully Convolutional Network For Extraction of Building Along High-Speed Rail Lines from VHR Remote Sensing Image. 2019,	
1245	Bend Detection of Bridge Chords in UAV Images via Region-Based Deep Semantic Segmentation Network. 2019,	
1244	Fusing Lidar Data and Aerial Imagery with Perspective Correction for Precise Localization in Urban Canyons. 2019,	2
1243	. 2019,	1
1242	Semantic Segmentation Network with Local Multi-Scale Attention for Locating Traffic Sign. 2019,	
1241	Conditional Patch-based Generative Adversarial Network for Retinal Vessel Segmentation. 2019,	4
1240	Comparison of Algorithms and Input Vectors for Sea-Ice Classification with L-band PolSAR Data. 2019,	
1239	Document Binarization via Multi-resolutional Attention Model with DRD Loss. 2019,	6
1238	Super-pixel Semantic Segmentation Method for Urban Complex Scenes. 2019,	
1237	Patch-Based Reconstruction of a Textureless Deformable 3D Surface from a Single RGB Image. 2019,	4

1236	Domain Adaptation for Semantic Segmentation Using Convolutional Neural Networks. 2019,	4
1235	Urban UAV Images Semantic Segmentation Based on Fully Convolutional Networks with Digital Surface Models. 2019,	1
1234	Scene-Guided Region Proposal Re-ranking Method for On-road Vehicle Candidate Generation. 2019	0
1233	Eye-MMS: Miniature Multi-Scale Segmentation Network of Key Eye-Regions in Embedded Applications. 2019,	12
1232	Efficient Instance and Semantic Segmentation for Automated Driving. 2019,	3
1231	A Method for Human Parsing Based on Deep Learning and Attention Mechanism. 2019,	
1230	. 2019,	1
1229	Learning Sensor Placement from Demonstration for UAV networks. 2019,	1
1228	Constraining Relative Camera Pose Estimation with Pedestrian Detector-Based Correspondence Filters. 2019,	
1227	Very High Resolution Image Semantic Segmentation with Contextualized Convolutional Neural Network Coupled with Higher Order Conditional Random Fields. 2019,	
1226	Full-Resolution Image Segmentation Model Combining Multi-Source Input Information. 2019,	
1225	SpinNet: Spinning convolutional network for lane boundary detection. 2019, 5, 417-428	9
1224	An Enhanced SqueezeNet Based Network for Real-Time Road-Object Segmentation. 2019,	0
1223	DeepVCP: An End-to-End Deep Neural Network for Point Cloud Registration. 2019,	58
1222	Low-Power Neural Networks for Semantic Segmentation of Satellite Images. 2019,	5
1221	Aircraft Segmentation from Remote Sensing Image by Transferring Natural Image Trained Foreground Extraction CNN Model. 2019,	1
1220	ScleraSegNet: an Improved U-Net Model with Attention for Accurate Sclera Segmentation. 2019,	7
1219	Learning-Free Iris Segmentation Revisited: A First Step Toward Fast Volumetric Operation Over Video Samples. 2019,	4

1218	Building Extraction from Remote Sensing Images Using SegNet. 2019,	0
1217	Lysosomes Computational Labeling Method Based on Feature Map Slice of Deeplabv3+. 2019,	
1216	More Competitive Feature Extraction Network for Instance Segmentation. 2019,	
1215	A Review on Semantic Segmentation from a Modern Perspective. 2019,	3
1214	Deep Learning Based Wearable Assistive System for Visually Impaired People. 2019,	12
1213	GSD-Net: Compact Network for Pixel-Level Graphical Symbol Detection. 2019,	2
1212	Surgical Navigation System for Transsphenoidal Pituitary Surgery Applying U-Net-Based Automatic Segmentation and Bendable Devices. 2019, 9, 5540	
1211	LiteSeg: A Novel Lightweight ConvNet for Semantic Segmentation. 2019,	22
1210	Back to the Future: Predicting Traffic Shockwave Formation and Propagation Using a Convolutional Encoder-Decoder Network. 2019,	1
1209	Resource-Aware Object Classification and Segmentation for Semi-Autonomous Grasping with Prosthetic Hands. 2019,	5
1208	Coarse Annotation Refinement for Segmentation of Dot-Matrix Batchcodes. 2019,	
1207	Small Obstacle Avoidance Based on RGB-D Semantic Segmentation. 2019,	6
1206	6DoF Vehicle Pose Estimation Using Segmentation-Based Part Correspondences. 2019,	
1205	Automatic Annotation for Semantic Segmentation in Indoor Scenes. 2019,	3
1204	Deep Learning Techniques Applied for Road Segmentation. 2019,	1
1203	Object Singulation by Nonlinear Pushing for Robotic Grasping. 2019,	1
1202	EyeNet: Attention Based Convolutional Encoder-Decoder Network for Eye Region Segmentation. 2019,	7
1201	Learning Actions from Human Demonstration Video for Robotic Manipulation. 2019,	4

1200	Multi-Task Deep Learning Design and Training Tool for Unified Visual Driving Scene Understanding. 2019,	1
1199	Asymmetric Non-Local Neural Networks for Semantic Segmentation. 2019,	169
1198	A Detector for Stacking Objects Based on Neural Network. 2019,	
1197	Automatic airway tree segmentation from pediatric CT images with foreign bodies based on convolutional neural network. 2019,	
1196	Motion and Depth Augmented Semantic Segmentation for Autonomous Navigation. 2019,	8
1195	FD-SLAM: Real-time Tracking and Mapping in Dynamic Environments. 2019,	0
1194	CLRCNet: Cascaded Low-rank Convolutions for Semantic Segmentation in Real-time. 2019,	
1193	. 2019,	47
1192	Indices Matter: Learning to Index for Deep Image Matting. 2019,	42
1191	Multi Mask Learning of Stone Segmentation for Auto-Monitoring System in TBM Construction. 2019,	2
1190	Machine learning-assisted seismic interpretation with geologic constraints. 2019,	5
1189	KE-GAN: Knowledge Embedded Generative Adversarial Networks for Semi-Supervised Scene Parsing. 2019,	9
1188	Learning Common Representation From RGB and Depth Images. 2019,	2
1187	Terrain Segmentation and Roughness Estimation using RGB Data: Path Planning Application on the CENTAURO Robot. 2019,	5
1186	Context Aggregation Network for Semantic Labeling in Aerial Images. 2019,	
1185	3D Virtual Garment Modeling from RGB Images. 2019,	4
1184	Motion Optimization for a Robotic Fish Based on Adversarial Structured Control. 2019,	
1183	Fully Convolutional CaptionNet: Siamese Difference Captioning Attention Model. 2019, 7, 175929-175939	9

1182	Brain Stroke Detection Using Convolutional Neural Network and Deep Learning Models. 2019,	5
1181	A Multi-level Feature Fusion Network for Real-time Semantic Segmentation. 2019,	2
1180	Building Footprint Extraction from Multispectral, Spaceborne Earth Observation Datasets Using a Structurally Optimized U-Net Convolutional Neural Network. 2019, 11, 2803	10
1179	Building Extraction from Very High Resolution Aerial Imagery Using Joint Attention Deep Neural Network. 2019, 11, 2970	27
1178	A Study on the Elimination of Thermal Reflections. 2019, 7, 174597-174611	7
1177	Partial Order Pruning: For Best Speed/Accuracy Trade-Off in Neural Architecture Search. 2019,	37
1176	Deep Convolutional Auto-encoders Based Fault Diagnosis for Diesel Generator Set. 2019,	0
1175	Combination of modified U-Net and domain adaptation for road detection. 2019, 13, 2735-2743	4
1174	High-Resolution Remote Sensing Imagery Classification of Imbalanced Data Using Multistage Sampling Method and Deep Neural Networks. 2019, 11, 2523	7
1173	Residual in Residual Based Convolutional Neural Network In-loop Filter for AVS3. 2019,	5
1172	An Enhanced U-Net for Brain Tumor Segmentation. 2019,	0
1171	A Unified Neural Network for Panoptic Segmentation. 2019, 38, 461-468	1
1170	Privacy-Preserving Auto-Driving: A GAN-Based Approach to Protect Vehicular Camera Data. 2019,	23
1169	Stable polyp-scene classification via subsampling and residual learning from an imbalanced large dataset. 2019, 6, 237-242	2
1168	Photometric Segmentation: Simultaneous Photometric Stereo and Masking. 2019,	2
1167	GAN Based Method for Labeled Image Augmentation in Autonomous Driving. 2019,	0
1166	DISC: A Large-scale Virtual Dataset for Simulating Disaster Scenarios. 2019,	4
1165	High-Resolution Imagery Classification Based on Different Levels of Information. 2019, 11, 2916	6

1164	Semantic Segmentation of Sheep Organs by Convolutional Neural Networks. 2019,	1
1163	Structured Knowledge Distillation for Semantic Segmentation. 2019,	122
1162	Deep Learning for Paint Loss Detection with a multiscale, translation invariant network. 2019,	3
1161	Deep learning approach to control of prosthetic hands with electromyography signals. 2019,	6
1160	NeurAll: Towards a Unified Visual Perception Model for Automated Driving. 2019,	15
1159	AI-powered transmitted light microscopy for functional analysis of live cells. 2019, 9, 18428	7
1158	AIM 2019 Challenge on Bokeh Effect Synthesis: Methods and Results. 2019,	7
1157	Semantic Segmentation of Fashion Photos using Light-Weight Asymmetric U-Net. 2019,	0
1156	What Else Can Fool Deep Learning? Addressing Color Constancy Errors on Deep Neural Network Performance. 2019,	32
1155	. 2019,	45
1154	Detecting the Unexpected via Image Resynthesis. 2019,	26
1153	HarDNet: A Low Memory Traffic Network. 2019,	78
1152	Learning Compositional Neural Information Fusion for Human Parsing. 2019,	40
1151	ACFNet: Attentional Class Feature Network for Semantic Segmentation. 2019,	71
1150	From Open Set to Closed Set: Counting Objects by Spatial Divide-and-Conquer. 2019,	48
1149	BAE-NET: Branched Autoencoder for Shape Co-Segmentation. 2019,	23
1148	Where Is My Mirror?. 2019,	16
1147	MinENet: A Dilated CNN for Semantic Segmentation of Eye Features. 2019,	7

1146	Aerial Image Semantic Segmentation Using Spatial and Channel Attention. 2019,	3
1145	Camera Exposure Control for Robust Robot Vision with Noise-Aware Image Quality Assessment. 2019,	5
1144	An Automated Ensembled Deep Neural Network Approach towards Accurate Segmentation of Biomedical Images. 2019,	
1143	Category-Sensitive Domain Adaptation for Land Cover Mapping in Aerial Scenes. 2019, 11, 2631	13
1142	. 2019,	14
1141	Online Model Distillation for Efficient Video Inference. 2019,	12
1140	. 2019,	10
1139	Automated Segmentation of the Vocal Folds in Laryngeal Endoscopy Videos Using Deep Convolutional Regression Networks. 2019,	4
1138	Segmentation of human body active millimeter-wave image based on deep learning. 2019,	
1137	DSNet: An Efficient CNN for Road Scene Segmentation. 2019,	6
1136	Fishyscapes: A Benchmark for Safe Semantic Segmentation in Autonomous Driving. 2019,	17
1135	Customizing Student Networks From Heterogeneous Teachers via Adaptive Knowledge Amalgamation. 2019,	7
1134	PANet: Few-Shot Image Semantic Segmentation With Prototype Alignment. 2019,	139
1133	3D Instance Segmentation via Multi-Task Metric Learning. 2019,	56
1132	Prior-Aware Neural Network for Partially-Supervised Multi-Organ Segmentation. 2019,	42
1131	A Novel Adversarial Inference Framework for Video Prediction with Action Control. 2019,	2
1130	EyeNet: A Multi-Task Deep Network for Off-Axis Eye Gaze Estimation. 2019,	2
1129	Adaptive deep learning for head and neck cancer detection using hyperspectral imaging. 2019, 2, 18	11

1128	A Comparative Study of Different CNN Encoders for Monocular Depth Prediction. 2019,	1
1127	Boundary-Aware Feature Propagation for Scene Segmentation. 2019,	65
1126	Brain Tumor Segmentation Based on Deep Learning. 2019,	2
1125	Detection of Distress Region from Subway Tunnel Images via U-net-based Deep Semantic Segmentation. 2019,	0
1124	Land Cover Classification for High Resolution Remote Sensing Images with Atrous Convolution and BFS. 2019,	2
1123	AutoDispNet: Improving Disparity Estimation With AutoML. 2019,	16
1122	SPGNet: Semantic Prediction Guidance for Scene Parsing. 2019,	53
1121	Research and Application of Question Answering System Based on Subject Knowledge Base. 2019, 1345, 032098	1
1120	DMFNet: Deep Multi-Modal Fusion Network for RGB-D Indoor Scene Segmentation. 2019, 7, 169350-169358	9
1119	Cascading Modular U-Nets for Document Image Binarization. 2019,	7
1118	. 2019,	6
1117	NDDR-CNN: Layerwise Feature Fusing in Multi-Task CNNs by Neural Discriminative Dimensionality Reduction. 2019,	35
1116	Automatic Spine Vertebra segmentation in CT images using Deep Learning. 2019,	
1115	Fully CNN-Based Pixel Level Classification Model for Urban Land Image Acquired by Unmanned Aerial Vehicle. 2019,	
1114	Student Becoming the Master: Knowledge Amalgamation for Joint Scene Parsing, Depth Estimation, and More. 2019,	21
1113	. 2019,	33
1112	. 2019,	11
1111	Context-Reinforced Semantic Segmentation. 2019,	22

1110	. 2019,	112
1109	Accel: A Corrective Fusion Network for Efficient Semantic Segmentation on Video. 2019,	23
1108	Self-Learned Feature Reconstruction and Offset-Dilated Feature Fusion for Real-Time Semantic Segmentation. 2019,	
1107	Comparison of 3D Point Cloud Processing and CNN Prediction Based on RGBD Images for Bionic-eye Navigation. 2019,	
1106	A Study on the Suitability of Applying Active Contour Evolution Models in Segmenting and Delineating Boundaries in Medical Images. 2019,	1
1105	. 2019,	50
1104	Deep Learning Based Automatic Crack Detection and Segmentation for Unmanned Aerial Vehicle Inspections. 2019,	6
1103	Accurate Lane Detection with Atrous Convolution and Spatial Pyramid Pooling for Autonomous Driving. 2019,	6
1102	Computer-aided diagnosis and decision-making system for medical data analysis: A case study on prostate MR images. 2019, 4, 266-278	4
1101	Triply Supervised Decoder Networks for Joint Detection and Segmentation. 2019,	32
1100	Investigation of Deep Learning Schemes in Medical Application. 2019,	4
1099	Binarization of Degraded Document Images using Convolutional Neural Networks Based on Predicted Two-Channel Images. 2019,	11
1098	A Dataflow Pipelining Architecture for Tile Segmentation with a Sparse MobileNet on an FPGA. 2019,	1
1097	Multi-task Network for Panoptic Segmentation in Automated Driving. 2019,	1
1096	A Grasping CNN with Image Segmentation for Mobile Manipulating Robot. 2019,	4
1095	Liver Segmentation in CT Images Using a Non-Local Fully Convolutional Neural Network. 2019,	2
1094	. 2019,	33
1093	Multi-lane Detection Using Instance Segmentation and Attentive Voting. 2019,	5

1092	Automatic Classification of Pararubber Trees in Thailand from LANDSAT-8 Images using Neural Networks Method. 2019,	
1091	A Point-Wise LiDAR and Image Multimodal Fusion Network (PMNet) for Aerial Point Cloud 3D Semantic Segmentation. 2019, 11, 2961	5
1090	Iris Recognition with Image Segmentation Employing Retrained Off-the-Shelf Deep Neural Networks. 2019,	10
1089	Multi-Stage Pathological Image Classification Using Semantic Segmentation. 2019,	11
1088	Autonomous landing on pipes using soft gripper for inspection and maintenance in outdoor environments. 2019,	5
1087	SegNet-based Corpus Callosum segmentation for brain Magnetic Resonance Images (MRI). 2019,	1
1086	A Deep Learning Semantic Segmentation-Based Approach for Field-Level Sorghum Panicle Counting. 2019, 11, 2939	20
1085	Edge-guided Hierarchically Nested Network for Real-time Semantic Segmentation. 2019,	
1084	. 2019,	1
1083	Real-Time Video Dehazing for Industrial Image Processing. 2019,	0
1082	Historical Document Text Binarization using Atrous Convolution and Multi-Scale Feature Decoder. 2019,	1
1081	. 2019,	121
1080	. 2019,	88
1079	VNet: A Versatile Network for Efficient Real-Time Semantic Segmentation. 2019,	0
1078	Deep learning enables automated volumetric assessments of cardiac function in zebrafish. 2019, 12,	16
1077	Multi-Stage Attention-Unet for Wireless Capsule Endoscopy Image Bleeding Area Segmentation. 2019,	7
1076	A Faster Semantic Segmentation Method for Lane Detection. 2019,	0
1075	. 2019,	48

1074	DFANet: Deep Feature Aggregation for Real-Time Semantic Segmentation. 2019,	159
1073	Monocular Depth Estimation Using Relative Depth Maps. 2019,	38
1072	. 2019,	62
1071	An Efficient Semantic Segmentation Method using Pyramid ShuffleNet V2 with Vortex Pooling. 2019,	3
1070	Collaborative Global-Local Networks for Memory-Efficient Segmentation of Ultra-High Resolution Images. 2019,	26
1069	MFCSNet: Multi-Scale Deep Features Fusion and Cost-Sensitive Loss Function Based Segmentation Network for Remote Sensing Images. 2019, 9, 4043	6
1068	Customizable Architecture Search for Semantic Segmentation. 2019,	39
1067	A Relation-Augmented Fully Convolutional Network for Semantic Segmentation in Aerial Scenes. 2019,	82
1066	. 2019,	39
1065	Design of data sharing module based on medical block chain. 2019,	1
1064	A Hierarchical Feature Fusion-based Method for Defect Recognition with a Small Sample. 2019,	4
1063	Panoptic Feature Pyramid Networks. 2019,	228
1062	DSOD: DSO in Dynamic Environments. 2019, 7, 178300-178309	5
1061	. 2019,	327
1060	IMP: Instance Mask Projection for High Accuracy Semantic Segmentation of Things. 2019,	8
1059	Counterfactual Depth from a Single RGB Image. 2019,	2
1058	Multi-Class Part Parsing With Joint Boundary-Semantic Awareness. 2019,	8
1057	. 2019,	138

1056	Road Scene Understanding by Occupancy Grid Learning from Sparse Radar Clusters using Semantic Segmentation. 2019,	14
1055	SlamCraft: Dense Planar RGB Monocular SLAM. 2019,	3
1054	Cell Image Segmentation by Integrating Pix2pixs for Each Class. 2019,	4
1053	The MaSTr1325 dataset for training deep USV obstacle detection models. 2019,	12
1052	Boxy Vehicle Detection in Large Images. 2019,	4
1051	U4D: Unsupervised 4D Dynamic Scene Understanding. 2019,	4
1050	Reverse and Boundary Attention Network for Road Segmentation. 2019,	12
1049	DECCNet: Depth Enhanced Crowd Counting. 2019,	3
1048	. 2019,	1
1047	Efficient Segmentation: Learning Downsampling Near Semantic Boundaries. 2019,	21
1046	On the Ability of a CNN to Realize Image-to-Image Language Conversion. 2019,	
1045	. 2019,	12
1044	Improving Human Parsing by Extracting Global Information Using the Non-Local Operation. 2019,	1
1043	OCT fluid detection and quantification. 2019, 273-298	1
1042	Automatic Segmentation of the Left Ventricle From Cardiac MRI Using Deep Learning and Double Snake Model. 2019, 7, 128641-128650	6
1041	Learning Semantic Graphics Using Convolutional Encoder-Decoder Network for Autonomous Weeding in Paddy. 2019, 10, 1404	20
1040	Multi-temporal Change Detection based on Deep Semantic Segmentation Networks. 2019,	
1039	Convolutional network-based method for wall-climbing robot direction angle measurement. 2019,	1

1038	Application of Machine-Learning to Construct Simulation Models from High-Resolution Fractured Formation. 2019,	5
1037	Regenerative Semi-Supervised Bidirectional W-Network-Based Knee Bone Tumor Classification on Radiographs Guided by Three-Region Bone Segmentation. 2019, 7, 154277-154289	4
1036	Sonar Image Detection Based on Multi-Scale Multi-Column Convolution Neural Networks. 2019, 7, 160755-160767	7
1035	Constrained-Focal-Loss Based Deep Learning for Segmentation of Spores. 2019, 7, 165029-165038	7
1034	Sample generation of semi-automatic pavement crack labelling and robustness in detection of pavement diseases. 2019, 55, 1235-1238	1
1033	Attention-Guided Network for Semantic Video Segmentation. 2019, 7, 140680-140689	7
1032	Semantic Scene Understanding in Unstructured Environment with Deep Convolutional Neural Network. 2019,	7
1031	Automated Method of Road Extraction from Aerial Images Using a Deep Convolutional Neural Network. 2019, 9, 4825	11
1030	Modification of single-purpose CNN for creating multi-purpose CNN. 2019, 1368, 052036	1
1029	A Survey on the New Generation of Deep Learning in Image Processing. 2019, 7, 172231-172263	40
1028	Road Surface Damage Detection Using Fully Convolutional Neural Networks and Semi-Supervised Learning. 2019, 19,	24
1027	Ear Detection Using Convolutional Neural Network on Graphs with Filter Rotation. 2019, 19,	5
1026	Accurate Semantic Segmentation in Turbulence Media. 2019, 7, 166749-166761	1
1025	Cascaded Fully Convolutional DenseNet for Automatic Kidney Segmentation in Ultrasound Images. 2019,	5
1024	EU-Net: An Efficient Fully Convolutional Network for Building Extraction from Optical Remote Sensing Images. 2019, 11, 2813	40
1023	The Right (Angled) Perspective: Improving the Understanding of Road Scenes Using Boosted Inverse Perspective Mapping. 2019,	12
1022	Medical image learning from a few/few training samples: Melanoma segmentation study. 2019, 14, 100088	6
1021	Efficient Semantic Segmentation Using Spatio-Channel Dilated Convolutions. 2019, 7, 154239-154252	6

1020	Road Detection via Deep Residual Dense U-Net. 2019,	7
1019	Recent Trends, Technical Concepts and Components of Computer-Assisted Orthopedic Surgery Systems: A Comprehensive Review. 2019, 19,	22
1018	Insulator Segmentation for Power Line Inspection Based on Modified Conditional Generative Adversarial Network. 2019, 2019, 1-8	11
1017	. 2019, 7, 158223-158236	17
1016	Crowd Counting via Multi-layer Regression. 2019,	7
1015	Real-Time Conveyor Belt Deviation Detection Algorithm Based on Multi-Scale Feature Fusion Network. 2019, 12, 205	4
1014	Deep-learning-assisted automatic digitization of applicators in 3D CT image-based high-dose-rate brachytherapy of gynecological cancer. 2019, 18, 841-851	7
1013	Spatial-Semantic Fusion Network for Semantic Segmentation in Real-time. 2019,	1
1012	Adversarially Trained Convolutional Neural Networks for Semantic Segmentation of Ischaemic Stroke Lesion using Multisequence Magnetic Resonance Imaging. 2019, 2019, 1010-1013	5
1011	Hematoxylin and Eosin (H&E) Stained Liver Portal Area Segmentation Using Multi-Scale Receptive Field Convolutional Neural Network. 2019, 9, 623-634	6
1010	Augmenting Deep Learning Performance in an Evidential Multiple Classifier System. 2019, 19,	
1009	Real-time human segmentation by BowtieNet and a SLAM-based human AR system. 2019, 1, 511-524	0
1008	Fully Convolutional Pyramidal Residual Network for Material Discrimination of Spectral CT. 2019, 7, 167187-167194	
1007	White Blood Cell Segmentation via Sparsity and Geometry Constraints. 2019, 7, 167593-167604	7
1006	Towards Automated Delineation of Smallholder Farm Fields From VHR Images Using Convolutional Networks. 2019,	
1005	Semantic Segmentation using K-means Clustering and Deep Learning in Satellite Image. 2019,	4
1004	Pyramid Context Contrast for Semantic Segmentation. 2019, 7, 173679-173693	1
1003	A Novel Nuclei Segmentation Algorithm Based on Convolutional Neural Network. 2019,	

1002	A Multi-Task Deep Learning Framework Coupling Semantic Segmentation and Image Reconstruction for Very High Resolution Imagery. 2019 ,	1
1001	A Deep Learning Approach to Horse Bone Segmentation from Digitally Reconstructed Radiographs. 2019 ,	2
1000	Disparity weighted loss for semantic segmentation of driving scenes. 2019 ,	
999	RGB and LiDAR fusion based 3D Semantic Segmentation for Autonomous Driving. 2019 ,	13
998	Attention Wave-U-Net for Speech Enhancement. 2019 ,	12
997	Meta-Seg: A Generalized Meta-Learning Framework for Multi-Class Few-Shot Semantic Segmentation. 2019 , 7, 166109-166121	10
996	Improving the Efficiency of Encoder-Decoder Architecture for Pixel-Level Crack Detection. 2019 , 7, 186657-186670	10
995	Accurate Ship Detection via Paired Semantic Segmentation. 2019 ,	1
994	Multistage Shallow Pyramid Parsing for Road Scene Understanding Based on Semantic Segmentation. 2019 ,	3
993	A Deep Learning Approach for Meibomian Gland Atrophy Evaluation in Meibography Images. 2019 , 8, 37	13
992	Convolutional Neural Net-Based Cassava Storage Root Counting Using Real and Synthetic Images. 2019 , 10, 1516	9
991	STN-Homography: Direct Estimation of Homography Parameters for Image Pairs. 2019 , 9, 5187	4
990	A Dual-Path and Lightweight Convolutional Neural Network for High-Resolution Aerial Image Segmentation. 2019 , 8, 582	10
989	Application of computer vision and neural network analysis to study the structure and dynamics of turbulent jets. 2019 , 1421, 012018	1
988	MSDF-Net: Multi-Scale Deep Fusion Network for Stroke Lesion Segmentation. 2019 , 7, 178486-178495	9
987	Feature context learning for human parsing. 2019 , 62, 1	6
986	Fast Lidar - Camera Fusion for Road Detection by CNN and Spherical Coordinate Transformation. 2019 ,	4
985	Multi-Class Lane Semantic Segmentation using Efficient Convolutional Networks. 2019 ,	7

984	Predicting Impervious Land Expansion Using Deep Deconvolutional Neural Networks. 2019,	2
983	Recurrent Iterative Gating Networks for Semantic Segmentation. 2019,	3
982	A comparison between two semantic deep learning frameworks for the autosomal dominant polycystic kidney disease segmentation based on magnetic resonance images. 2019, 19, 244	11
981	Attention Graph Convolution Network for Image Segmentation in Big SAR Imagery Data. 2019, 11, 2586	29
980	OCT-Based Periodontal Inspection Framework. 2019, 19,	2
979	3D Neighborhood Convolution: Learning Depth-Aware Features for RGB-D and RGB Semantic Segmentation. 2019,	14
978	Pedestrian Parsing by Joint Learning from Wholes and Parts. 2019,	1
977	Brain Tissue Segmentation Integrating Multi-level Features. 2019,	1
976	How Effective Is Super-Resolution to Improve Dense Labelling of Coarse Resolution Imagery?. 2019	3
975	Automated Placenta Segmentation with a Convolutional Neural Network Weighted by Acoustic Shadow Detection. 2019, 2019, 6718-6723	4
974	A Multiscale Neural Network Based on Hierarchical Matrices. 2019, 17, 1189-1213	12
973	A Deep Learning Image-Based Sensor for Real-Time Crystal Size Distribution Characterization. 2019 , 58, 23175-23186	12
972	Unsupervised data to content transformation with histogram-matching cycle-consistent generative adversarial networks. 2019, 1, 461-470	13
971	DCLane for Real-time Understanding of Lane Markings. 2019,	
970	FaultNet: Faulty Rail-Valves Detection using Deep Learning and Computer Vision. 2019,	10
969	Accurate Building Extraction from Fused DSM and UAV Images Using a Chain Fully Convolutional Neural Network. 2019, 11, 2912	18
968	ANT-UNet: Accurate and Noise-Tolerant Segmentation for Pathology Image Processing. 2019,	1
967	Comparing CNNs for non-conventional traffic participants. 2019,	5

966	Robust Cylindrical Panorama Stitching for Low-Texture Scenes Based on Image Alignment Using Deep Learning and Iterative Optimization. 2019 , 19,	5
965	Waterfall Atrous Spatial Pooling Architecture for Efficient Semantic Segmentation. 2019 , 19,	18
964	Ship Detection under Complex Backgrounds Based on Accurate Rotated Anchor Boxes from Paired Semantic Segmentation. 2019 , 11, 2506	12
963	Image Segmentation of Salt Deposits Using Deep Convolutional Neural Network. 2019 ,	0
962	Novel Segmentation Metrics for Use in Augmented Reality Advertisement Integration. 2019 ,	
961	An Improved Flower Pollination Optimizer Algorithm for Multilevel Image Thresholding. 2019 , 7, 165571-165584,	
960	. 2019 , 7, 171001-171012	21
959	Joint Coarse-and-Fine Semantic Segmentation. 2019 ,	
958	Visual Saliency Aided SAR and Optical Image Matching. 2019 ,	1
957	GEOSEG: A Computer Vision Package for Automatic Building Segmentation and Outline Extraction. 2019 ,	4
956	Quality-based Regularization for Iterative Deep Image Segmentation. 2019 , 2019, 6734-6737	3
955	Strong-Structural Convolution Neural Network for Semantic Segmentation. 2019 , 29, 716-729	3
954	Improved Stacked Hourglass Network with Offset Learning for Robust Facial Landmark Detection. 2019 ,	1
953	. 2019 ,	2
952	Automated Identification of Wood Veneer Surface Defects Using Faster Region-Based Convolutional Neural Network with Data Augmentation and Transfer Learning. 2019 , 9, 4898	45
951	Robust Image Watermarking Framework Powered by Convolutional Encoder-Decoder Network. 2019 ,	3
950	A Deep Learning-Based Decision Support Tool for Precision Risk Assessment of Breast Cancer. 2019 , 3, 1-12	14
949	Semantic Segmentation of High Resolution Remote Sensing Image Based on Batch-Attention Mechanism. 2019 ,	4

948	On the Application of Automated Machine Vision for Leather Defect Inspection and Grading: A Survey. 2019 , 7, 176065-176086	11
947	Temporal 3D Fully Connected Network for Water-Hazard Detection. 2019 ,	0
946	Quantification and Analysis of Laryngeal Closure From Endoscopic Videos. 2019 , 66, 1127-1136	15
945	Keyframes and Shot Boundaries: The Attributes of Scene Segmentation and Classification. 2019 , 771-782	2
944	Fast and Scalable Position-Based Layout Synthesis. 2019 , 25, 3231-3243	1
943	Alignment of Deep Features in 3D Models for Camera Pose Estimation. 2019 , 440-452	
942	Deep Ear Recognition Pipeline. 2019 , 333-362	8
941	Fast Sketch Segmentation and Labeling With Deep Learning. 2019 , 39, 38-51	19
940	ChipNet: Real-Time LiDAR Processing for Drivable Region Segmentation on an FPGA. 2019 , 66, 1769-1779	30
939	Small Object Sensitive Segmentation of Urban Street Scene with Spatial Adjacency Between Object Classes. 2018 ,	21
938	An overview of deep learning in medical imaging focusing on MRI. 2019 , 29, 102-127	684
937	Environmental sound classification with dilated convolutions. 2019 , 148, 123-132	37
936	A propagation-DNN: Deep combination learning of multi-level features for MR prostate segmentation. 2019 , 170, 11-21	21
935	Designing efficient accelerator of depthwise separable convolutional neural network on FPGA. 2019 , 97, 278-286	22
934	A Y-Net deep learning method for road segmentation using high-resolution visible remote sensing images. 2019 , 10, 381-390	35
933	Polarimetric Convolutional Network for PolSAR Image Classification. 2019 , 57, 3040-3054	51
932	Cervical Nuclei Segmentation in Whole Slide Histopathology Images Using Convolution Neural Network. 2019 , 99-109	2
931	PhaseNet: A Deep Convolutional Neural Network for Two-Dimensional Phase Unwrapping. 2019 , 26, 54-58	79

930	A collaborative computer aided diagnosis (C-CAD) system with eye-tracking, sparse attentional model, and deep learning. 2019 , 51, 101-115	33
929	Leveraging semantic segmentation with learning-based confidence measure. 2019 , 329, 21-31	8
928	DeepCrack: Learning Hierarchical Convolutional Features for Crack Detection. 2018 ,	208
927	Direct Segmentation-Based Full Quantification for Left Ventricle via Deep Multi-Task Regression Learning Network. 2019 , 23, 942-948	16
926	A Local Metric for Defocus Blur Detection Based on CNN Feature Learning. 2019 , 28, 2107-2115	16
925	TEMPORARY REMOVAL: Aerial imagery for roof segmentation: A large-scale dataset towards automatic mapping of buildings. 2019 , 147, 42-55	51
924	Variational inference with Gaussian mixture model and householder flow. 2019 , 109, 43-55	11
923	. 2019 , 66, 7407-7416	9
922	Splenomegaly Segmentation on Multi-Modal MRI Using Deep Convolutional Networks. 2019 , 38, 1185-1196	21
921	Artificial intelligence for aging and longevity research: Recent advances and perspectives. 2019 , 49, 49-66	63
920	Problems of encoder-decoder frameworks for high-resolution remote sensing image segmentation: Structural stereotype and insufficient learning. 2019 , 330, 297-304	35
919	. 2019 , 16, 613-617	21
918	Water Body Extraction From Very High-Resolution Remote Sensing Imagery Using Deep U-Net and a Superpixel-Based Conditional Random Field Model. 2019 , 16, 618-622	66
917	A dataset of laryngeal endoscopic images with comparative study on convolution neural network-based semantic segmentation. 2019 , 14, 483-492	34
916	Adapting Semantic Segmentation Models for Changes in Illumination and Camera Perspective. 2019 , 4, 461-468	10
915	Monocular Semantic Occupancy Grid Mapping With Convolutional Variational EncoderDecoder Networks. 2019 , 4, 445-452	31
914	From superpixel to human shape modelling for carried object detection. 2019 , 89, 134-150	7
913	RefineNet: Multi-Path Refinement Networks for Dense Prediction. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2020 , 42, 1228-1242	13.3 33

912	Deep gated attention networks for large-scale street-level scene segmentation. 2019 , 88, 702-714	51
911	Accuracy improvement of functional attribute recognition by dense CRF considering object shape. 2019 , 102, 56-62	0
910	U-Net Based Segmentation and Multiple Feature Extraction of Dermoscopic Images for Efficient Diagnosis of Melanoma. 2019 , 81-101	2
909	FRED-Net: Fully residual encoder-decoder network for accurate iris segmentation. 2019 , 122, 217-241	39
908	Multi-stage learning for gender and age prediction. 2019 , 334, 114-124	9
907	Efficient Semantic Segmentation for Visual Bird-Eye View Interpretation. 2019 , 679-688	1
906	Semantic segmentation of high spatial resolution images with deep neural networks. 2019 , 56, 749-768	20
905	An End-to-End Human Segmentation by Region Proposed Fully Convolutional Network. 2019 , 7, 16395-16405	5
904	Fully Convolutional DenseNet with Multiscale Context for Automated Breast Tumor Segmentation. 2019 , 2019, 8415485	28
903	Automatic Needle Segmentation and Localization in MRI With 3-D Convolutional Neural Networks: Application to MRI-Targeted Prostate Biopsy. 2019 , 38, 1026-1036	25
902	A scale robust convolutional neural network for automatic building extraction from aerial and satellite imagery. 2019 , 40, 3308-3322	61
901	Fish species identification using a convolutional neural network trained on synthetic data. 2019 , 76, 342-349	45
900	Improving Performance of Devanagari Script Input-Based P300 Speller Using Deep Learning. 2019 , 66, 2992-3005	18
899	Automatic brain labeling via multi-atlas guided fully convolutional networks. 2019 , 51, 157-168	14
898	STRAINet: Spatially Varying Stochastic Residual Adversarial Networks for MRI Pelvic Organ Segmentation. 2019 , 30, 1552-1564	26
897	Using long short-term memory recurrent neural network in land cover classification on Landsat and Cropland data layer time series. 2019 , 40, 593-614	49
896	Face Mask Extraction in Video Sequence. 2019 , 127, 625-641	9
895	A Deep Learning-Based Approach for the Detection and Localization of Prostate Cancer in T2 Magnetic Resonance Images. 2019 , 32, 793-807	46

894	Semantic Understanding of Scenes Through the ADE20K Dataset. 2019 , 127, 302-321	245
893	CoinNet: Copy Initialization Network for Multispectral Imagery Semantic Segmentation. 2019 , 16, 816-820	38
892	Deep Learning Based Multi-Modal Fusion for Fast MR Reconstruction. 2018 ,	44
891	Image-based post-disaster inspection of reinforced concrete bridge systems using deep learning with Bayesian optimization. 2019 , 34, 415-430	140
890	Technical and clinical overview of deep learning in radiology. 2019 , 37, 15-33	43
889	Tumor co-segmentation in PET/CT using multi-modality fully convolutional neural network. 2018 , 64, 015011	74
888	Automated phenotyping of epicuticular waxes of grapevine berries using light separation and convolutional neural networks. 2019 , 156, 263-274	7
887	Firefly Optimization Based Improved Fuzzy Clustering for CT/MR Image Segmentation. 2019 , 1-28	4
886	Deep Learning with Microfluidics for Biotechnology. 2019 , 37, 310-324	92
885	Developing an Offline Persian Automatic Lip Reader as a New Human Mobile Interaction Method in Android Smart Phones. 2019 , 28, 1950132	0
884	Semantic segmentation of high-resolution remote sensing images using fully convolutional network with adaptive threshold. 2019 , 31, 169-184	26
883	Spectral Total-Variation Local Scale Signatures for Image Manipulation and Fusion. 2018 ,	22
882	Look into Person: Joint Body Parsing & Pose Estimation Network and a New Benchmark. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2018 ,	13,3 109
881	Importance-Aware Semantic Segmentation for Autonomous Vehicles. 2019 , 20, 137-148	35
880	3-D Fully Convolutional Networks for Multimodal Isointense Infant Brain Image Segmentation. 2019 , 49, 1123-1136	85
879	Image Segmentation Using Computational Intelligence Techniques: Review. 2019 , 26, 533-596	50
878	Semantic Segmentation of Pathological Lung Tissue With Dilated Fully Convolutional Networks. 2019 , 23, 714-722	55
877	Three-Dimensional Feature-Enhanced Network for Automatic Femur Segmentation. 2019 , 23, 243-252	18

876	Automatic lung segmentation in low-dose chest CT scans using convolutional deep and wide network (CDWN). 2020 , 32, 15845-15855	10
875	SCN: Switchable Context Network for Semantic Segmentation of RGB-D Images. 2020 , 50, 1120-1131	33
874	Perspective-Adaptive Convolutions for Scene Parsing. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2020 , 42, 909-924	13.3 8
873	Unsupervised domain adaptation with target reconstruction and label confusion in the common subspace. 2020 , 32, 4743-4756	3
872	COMBAHO: A deep learning system for integrating brain injury patients in society. 2020 , 137, 80-90	1
871	Automatic Nucleus Segmentation with Mask-RCNN. 2020 , 399-407	35
870	Motion-Appearance Interactive Encoding for Object Segmentation in Unconstrained Videos. 2020 , 30, 1613-1624	3
869	A survey on indoor RGB-D semantic segmentation: from hand-crafted features to deep convolutional neural networks. 2020 , 79, 4499-4524	8
868	Robust brain extraction tool for CT head images. 2020 , 392, 189-195	12
867	Real-time shape tracking of facial landmarks. 2020 , 79, 15945-15963	4
866	On the Robustness of Semantic Segmentation Models to Adversarial Attacks. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2020 , 42, 3040-3053	13.3 5
865	Computer aided detection in automated 3-D breast ultrasound images: a survey. 2020 , 53, 1919-1941	7
864	Automatic adjustment of the pulse-coupled neural network hyperparameters based on differential evolution and cluster validity index for image segmentation. 2020 , 97, 105547	6
863	Transfer learning between crop types for semantic segmentation of crops versus weeds in precision agriculture. 2020 , 37, 7-19	36
862	Automatic Traffic Sign Detection and Recognition Using SegU-Net and a Modified Tversky Loss Function With L1-Constraint. 2020 , 21, 1467-1479	33
861	Deep Learning for Variational Multimodality Tumor Segmentation in PET/CT. 2020 , 392, 277-295	43
860	Spatial interpolation using conditional generative adversarial neural networks. 2020 , 34, 735-758	41
859	Automated Evaluation of Semantic Segmentation Robustness for Autonomous Driving. 2020 , 21, 1951-1963	26

858	Brain tumor segmentation with deep convolutional symmetric neural network. 2020 , 392, 305-313		43
857	A Curriculum Domain Adaptation Approach to the Semantic Segmentation of Urban Scenes. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2020 , 42, 1823-1841	13.3	47
856	Traffic sign detection and recognition based on pyramidal convolutional networks. 2020 , 32, 6533-6543		18
855	A novel unsupervised 3D skeleton detection in RGB-D images for video surveillance. 2020 , 79, 15829-15857		1
854	FC-RCCN: Fully convolutional residual continuous CRF network for semantic segmentation. 2020 , 130, 54-63		7
853	PASS: Panoramic Annular Semantic Segmentation. 2020 , 21, 4171-4185		41
852	Comparison of heuristic and deep learning-based methods for ground classification from aerial point clouds. 2020 , 13, 1115-1134		4
851	Action matching network: open-set action recognition using spatio-temporal representation matching. 2020 , 36, 1457-1471		8
850	OR-Skip-Net: Outer residual skip network for skin segmentation in non-ideal situations. 2020 , 141, 112922		17
849	Mumford-Shah Loss Functional for Image Segmentation with Deep Learning. 2019 ,		42
848	Edge-Sensitive Human Cutout with Hierarchical Granularity and Loopy Matting Guidance. 2019 ,		3
847	Automated segmentation of fluid regions in optical coherence tomography B-scan images of age-related macular degeneration. 2020 , 122, 105830		13
846	GC-Net: Global context network for medical image segmentation. 2020 , 190, 105121		26
845	Integration of top-down and bottom-up visual processing using a recurrent convolutional-deconvolutional neural network for semantic segmentation. 2020 , 13, 87-97		1
844	Example-Based Colourization Via Dense Encoding Pyramids. 2020 , 39, 20-33		10
843	Multi-layer Adaptive Feature Fusion for Semantic Segmentation. 2020 , 51, 1081-1092		1
842	SDDNet: Real-Time Crack Segmentation. 2020 , 67, 8016-8025		84
841	SeDAR: Reading Floorplans Like a Human Using Deep Learning to Enable Human-Inspired Localisation. 2020 , 128, 1286-1310		3

840	Deep Salient Object Detection with Contextual Information Guidance. 2019 ,	30
839	Context-adaptive neural network based prediction for image compression. 2019 ,	19
838	Coal Cleat/Fracture Segmentation Using Convolutional Neural Networks. 2020 , 29, 1675-1685	23
837	A comparative study of fruit detection and counting methods for yield mapping in apple orchards. 2020 , 37, 263-282	48
836	Breast tumor segmentation and shape classification in mammograms using generative adversarial and convolutional neural network. 2020 , 139, 112855	67
835	. 2020 , 21, 3536-3550	37
834	A survey of feature extraction and fusion of deep learning for detection of abnormalities in video endoscopy of gastrointestinal-tract. 2020 , 53, 2635-2707	15
833	A hybrid deep learningBased model for automatic car extraction from high-resolution airborne imagery. 2020 , 12, 107-119	5
832	Robust joint stem detection and crop-weed classification using image sequences for plant-specific treatment in precision farming. 2020 , 37, 20-34	30
831	Digital Enhancement of Cultural Experience and Accessibility for the Visually Impaired. 2020 , 237-271	8
830	Beyond the Patchwise Classification: Spectral-Spatial Fully Convolutional Networks for Hyperspectral Image Classification. 2020 , 6, 492-506	52
829	Automated deep learning method for whole-breast segmentation in diffusion-weighted breast MRI. 2020 , 51, 635-643	19
828	Coarse-to-Fine Semantic Segmentation From Image-Level Labels. 2020 , 29, 225-236	34
827	Segmentation of sonar imagery using convolutional neural networks and Markov random field. 2020 , 31, 21-47	5
826	A deep learning framework for land-use/land-cover mapping and analysis using multispectral satellite imagery. 2020 , 32, 8529-8544	14
825	Deep video-to-video transformations for accessibility with an application to photosensitivity. 2020 , 137, 99-107	0
824	GAN-Based virtual-to-real image translation for urban scene semantic segmentation. 2020 , 394, 127-135	11
823	Coarse-to-Fine Deep Learning of Continuous Pedestrian Orientation Based on Spatial Co-Occurrence Feature. 2020 , 21, 2522-2533	0

822	3D Neuron Reconstruction in Tangled Neuronal Image With Deep Networks. 2020 , 39, 425-435	16
821	A unified convolutional neural network integrated with conditional random field for pipe defect segmentation. 2020 , 35, 162-177	36
820	Parallel Architecture of Fully Convolved Neural Network for Retinal Vessel Segmentation. 2020 , 33, 168-180	9
819	Road segmentation with image-LiDAR data fusion in deep neural network. 2020 , 79, 35503-35518	8
818	A novel CT image segmentation algorithm using PCNN and Sobolev gradient methods in GPU frameworks. 2020 , 23, 837-854	2
817	Multiscale Refinement Network for Water-Body Segmentation in High-Resolution Satellite Imagery. 2020 , 17, 686-690	18
816	Degraded Image Semantic Segmentation with Dense-Gram Networks. 2019 ,	19
815	Convective Clouds Extraction From Himawari8 Satellite Images Based on Double-Stream Fully Convolutional Networks. 2020 , 17, 553-557	12
814	Deeply-Supervised Networks With Threshold Loss for Cancer Detection in Automated Breast Ultrasound. 2020 , 39, 866-876	34
813	Precise Measurement of Position and Attitude Based on Convolutional Neural Network and Visual Correspondence Relationship. 2020 , 31, 2030-2041	9
812	RescueNet: An unpaired GAN for brain tumor segmentation. 2020 , 55, 101641	54
811	Hierarchical Weakly Supervised Learning for Residential Area Semantic Segmentation in Remote Sensing Images. 2020 , 17, 117-121	18
810	A two-stage attention aware method for train bearing shed oil inspection based on convolutional neural networks. 2020 , 380, 212-224	11
809	Color-based template selection for detection of gastric abnormalities in video endoscopy. 2020 , 56, 101668	4
808	A feature transfer enabled multi-task deep learning model on medical imaging. 2020 , 143, 112957	33
807	Automatic kidney segmentation in ultrasound images using subsequent boundary distance regression and pixelwise classification networks. 2020 , 60, 101602	25
806	Seismic Facies Analysis Based on Deep Learning. 2020 , 17, 1119-1123	14
805	CompactNets: Compact Hierarchical Compositional Networks for Visual Recognition. 2020 , 191, 102841	2

804	Learning to Draw Sight Lines. 2020 , 128, 1076-1100	3
803	DCGSA: A global self-attention network with dilated convolution for crowd density map generating. 2020 , 378, 455-466	2
802	BCEFCM_S: Bias correction embedded fuzzy c-means with spatial constraint to segment multiple spectral images with intensity inhomogeneities and noises. 2020 , 168, 107347	15
801	Deep neural networks design and analysis for automatic phase pickers from three-component microseismic recordings. 2020 , 220, 323-334	7
800	FABnet: feature attention-based network for simultaneous segmentation of microvessels and nerves in routine histology images of oral cancer. 2020 , 32, 9915-9928	11
799	DCCMED-Net: Densely connected and concatenated multi Encoder-Decoder CNNs for retinal vessel extraction from fundus images. 2020 , 134, 109426	25
798	Stable Responsive EMG Sequence Prediction and Adaptive Reinforcement With Temporal Convolutional Networks. 2020 , 67, 1707-1717	18
797	A survey of deep learning techniques for autonomous driving. 2020 , 37, 362-386	256
796	A Wave-shaped Deep Neural Network for Smoke Density Estimation. 2019 ,	17
795	Vision-based automated bridge component recognition with high-level scene consistency. 2020 , 35, 465-482	32
794	. 2020 , 8, 34019-34028	2
793	FatSegNet: A fully automated deep learning pipeline for adipose tissue segmentation on abdominal dixon MRI. 2020 , 83, 1471-1483	28
792	Automatic myocardial segmentation in dynamic contrast enhanced perfusion MRI using Monte Carlo dropout in an encoder-decoder convolutional neural network. 2020 , 185, 105150	9
791	Segmentation using adversarial image-to-image networks. 2020 , 165-182	2
790	Landmark detection and multiorgan segmentation: Representations and supervised approaches. 2020 , 205-229	1
789	Mask SSD: An Effective Single-Stage Approach to Object Instance Segmentation. 2020 , 29, 2078-2093	25
788	Robust Lane Detection From Continuous Driving Scenes Using Deep Neural Networks. 2020 , 69, 41-54	92
787	Attribute-Aware Loss Function for Accurate Semantic Segmentation Considering the Pedestrian Orientations. 2020 , E103.A, 231-242	3

786	Nv-Net: Efficient infrared image segmentation with convolutional neural networks in the low illumination environment. 2020 , 105, 103184	6
785	A Review on Deep Learning in Medical Image Reconstruction. 2020 , 8, 311-340	60
784	Identification of Salt Deposits on Seismic Images Using Deep Learning Method for Semantic Segmentation. 2020 , 9, 24	6
783	Estimation of crack width based on shape-sensitive kernels and semantic segmentation. 2020 , 27, e2504	25
782	Towards infield, live plant phenotyping using a reduced-parameter CNN. 2020 , 31, 2	9
781	Contextual deconvolution network for semantic segmentation. 2020 , 101, 107152	22
780	Optimizing convolutional neural networks to perform semantic segmentation on large materials imaging datasets: X-ray tomography and serial sectioning. 2020 , 160, 110119	32
779	CRoWNet: Deep Network for Crop Row Detection in UAV Images. 2020 , 8, 5189-5200	29
778	ICENET: A Semantic Segmentation Deep Network for River Ice by Fusing Positional and Channel-Wise Attentive Features. 2020 , 12, 221	14
777	Segmentation of organs-at-risk in cervical cancer CT images with a convolutional neural network. 2020 , 69, 184-191	33
776	Deep Learning-Based Super-resolution Ultrasound Speckle Tracking Velocimetry. 2020 , 46, 598-609	7
775	Sea-Land Segmentation Using Deep Learning Techniques for Landsat-8 OLI Imagery. 2020 , 43, 105-133	7
774	One View Per City for Buildings Segmentation in Remote-Sensing Images via Fully Convolutional Networks: A Proof-of-Concept Study. 2019 , 20,	1
773	Scale-aware spatial pyramid pooling with both encoder-mask and scale-attention for semantic segmentation. 2020 , 383, 174-182	8
772	The Method of Extracting Land Classification Information by HRI-RefineNET Model. 2020 , 8, 599-610	
771	Automatic Pancreas Segmentation via Coarse Location and Ensemble Learning. 2020 , 8, 2906-2914	13
770	PGA-Net: Pyramid Feature Fusion and Global Context Attention Network for Automated Surface Defect Detection. 2020 , 16, 7448-7458	85
769	Accuracy, uncertainty, and adaptability of automatic myocardial ASL segmentation using deep CNN. 2020 , 83, 1863-1874	4

768	Multiscale receptive field based on residual network for pancreas segmentation in CT images. 2020 , 57, 101828	16
767	DeepCQ: Deep multi-task conditional quantification network for estimation of left ventricle parameters. 2020 , 184, 105288	4
766	Application of deep learning for retinal image analysis: A review. 2020 , 35, 100203	54
765	Comparison of Artificial Intelligence based approaches to cell function prediction. 2020 , 18, 100270	5
764	A DualBranch Attention fusion deep network for multiresolution remoteSensing image classification. 2020 , 58, 116-131	26
763	A convolutional neural network approach for counting and geolocating citrus-trees in UAV multispectral imagery. 2020 , 160, 97-106	60
762	Benefiting from multitask learning to improve single image super-resolution. 2020 , 398, 304-313	6
761	Hybrid method for automatic construction of 3D-ASM image intensity models for left ventricle. 2020 , 396, 65-75	1
760	Traffic scene semantic segmentation using self-attention mechanism and bi-directional GRU to correlate context. 2020 , 386, 293-304	4
759	Dynamic attention network for semantic segmentation. 2020 , 384, 182-191	19
758	Segmentation of Multiple Tree Leaves Pictures with Natural Backgrounds using Deep Learning for Image-Based Agriculture Applications. 2020 , 10, 202	13
757	Deep Joint Depth Estimation and Color Correction From Monocular Underwater Images Based on Unsupervised Adaptation Networks. 2020 , 30, 3995-4008	16
756	Glomerulosclerosis identification in whole slide images using semantic segmentation. 2020 , 184, 105273	46
755	Knowledge based domain adaptation for semantic segmentation. 2020 , 193, 105444	7
754	Fully Convolutional Network-Based Ensemble Method for Road Extraction From Aerial Images. 2020 , 17, 1777-1781	23
753	. 2020 , 30, 4192-4206	10
752	Maintaining accurate, current, rural road network data: An extraction and updating routine using RapidEye, participatory GIS and deep learning. 2020 , 87, 102031	14
751	Dilated Residual Learning With Skip Connections for Real-Time Denoising of Laser Speckle Imaging of Blood Flow in a Log-Transformed Domain. 2020 , 39, 1582-1593	1

750	Computer vision for behaviour-based safety in construction: A review and future directions. 2020 , 43, 100980	62
749	Waterline and obstacle detection in images from low-cost autonomous boats for environmental monitoring. 2020 , 124, 103346	18
748	Dense Dilated Network With Probability Regularized Walk for Vessel Detection. 2020 , 39, 1392-1403	31
747	Uncertainty and interpretability in convolutional neural networks for semantic segmentation of colorectal polyps. 2020 , 60, 101619	45
746	Deep convolutional neural network for accurate segmentation and quantification of white matter hyperintensities. 2020 , 384, 231-242	12
745	Simultaneous Segmentation and Classification of Mass Region From Mammograms Using a Mixed-Supervision Guided Deep Model. 2020 , 27, 196-200	7
744	Human-Centric Clothing Segmentation via Deformable Semantic Locality-Preserving Network. 2020 , 30, 4837-4848	8
743	Weed detection in canola fields using maximum likelihood classification and deep convolutional neural network. 2020 , 7, 535-545	29
742	DenseLightNet: A Light-Weight Vehicle Detection Network for Autonomous Driving. 2020 , 67, 10600-10609	18
741	Sky pixel detection in outdoor imagery using an adaptive algorithm and machine learning. 2020 , 31, 100572	2
740	ADSCNet: asymmetric depthwise separable convolution for semantic segmentation in real-time. 2020 , 50, 1045-1056	17
739	MediMLP: Using Grad-CAM to Extract Crucial Variables for Lung Cancer Postoperative Complication Prediction. 2020 , 24, 1762-1771	12
738	Deep learning: definition and perspectives for thoracic imaging. 2020 , 30, 2021-2030	23
737	Inter-foetus Membrane Segmentation for TTTS Using Adversarial Networks. 2020 , 48, 848-859	10
736	An ensemble of fine-tuned fully convolutional neural networks for pleural effusion cell nuclei segmentation. 2020 , 81, 106533	4
735	Post-mortem iris recognition with deep-learning-based image segmentation. 2020 , 94, 103866	22
734	PaDNet: Pan-Density Crowd Counting. 2019 ,	40
733	Improving brain tumor segmentation on MRI based on the deep U-net and residual units. 2020 , 28, 95-110	9

732	Advances on pancreas segmentation: a review. 2020 , 79, 6799-6821	4
731	Context-Aware Mixed Reality: A Learning-Based Framework for Semantic-Level Interaction. 2020 , 39, 484-496	2
730	A computer-aided diagnosis system for differentiation and delineation of malignant regions on whole-slide prostate histopathology image using spatial statistics and multidimensional DenseNet. 2020 , 47, 1021-1033	17
729	Effectiveness of a Deep-learning Polyp Detection System in Prospectively Collected Colonoscopy Videos With Variable Bowel Preparation Quality. 2020 , 54, 554-557	11
728	Pixel-Level Remote Sensing Image Recognition Based on Bidirectional Word Vectors. 2020 , 58, 1281-1293	58
727	Automated cartilage and meniscus segmentation of knee MRI with conditional generative adversarial networks. 2020 , 84, 437-449	38
726	Integrated design of deep features fusion for localization and classification of skin cancer. 2020 , 131, 63-70	33
725	Wireless Capsule Endoscopy: A New Tool for Cancer Screening in the Colon With Deep-Learning-Based Polyp Recognition. 2020 , 108, 178-197	21
724	A new convolutional neural network model for peripapillary atrophy area segmentation from retinal fundus images. 2020 , 86, 105890	13
723	Land Cover Classification From VHR Optical Remote Sensing Images by Feature Ensemble Deep Learning Network. 2020 , 17, 1396-1400	18
722	SRHandNet: Real-time 2D Hand Pose Estimation with Simultaneous Region Localization. 2019 ,	17
721	K-Net: Integrate Left Ventricle Segmentation and Direct Quantification of Paired Echo Sequence. 2020 , 39, 1690-1702	24
720	Cerebrovascular segmentation from TOF-MRA using model- and data-driven method via sparse labels. 2020 , 380, 162-179	12
719	A Multilevel Information Fusion-Based Deep Learning Method for Vision-Based Defect Recognition. 2020 , 69, 3980-3991	25
718	Extraction of road blockage information for the Jiuzhaigou earthquake based on a convolution neural network and very-high-resolution satellite images. 2020 , 13, 115-127	8
717	Image semantic segmentation with an improved fully convolutional network. 2020 , 24, 8253-8273	1
716	AUNet: attention-guided dense-upsampling networks for breast mass segmentation in whole mammograms. 2020 , 65, 055005	40
715	Deep learning tools for the measurement of animal behavior in neuroscience. 2020 , 60, 1-11	112

714	Supapixel-enhanced deep neural forest for remote sensing image semantic segmentation. 2020 , 159, 140-152	57
713	Fast implementation of real-time fruit detection in apple orchards using deep learning. 2020 , 168, 105108	71
712	Land-cover classification with high-resolution remote sensing images using transferable deep models. 2020 , 237, 111322	203
711	A survey of traditional and deep learning-based feature descriptors for high dimensional data in computer vision. 2020 , 9, 135-170	31
710	Vision based pixel-level bridge structural damage detection using a link ASPP network. 2020 , 110, 102973	11
709	Research on Sea Clutter Reflectivity Using Deep Learning Model in Industry 4.0. 2020 , 16, 5929-5937	8
708	Multistage GAN for Fabric Defect Detection. 2019 ,	51
707	. 2020 , 30, 3513-3527	15
706	Incremental and Multi-Task Learning Strategies for Coarse-To-Fine Semantic Segmentation. 2020 , 8, 1	5
705	Improved Highway Network Block for Training Very Deep Neural Networks. 2020 , 8, 176758-176773	2
704	Segmentation of Tau Stained Alzheimers Brain Tissue Using Convolutional Neural Networks. 2020 , 2020, 1420-1423	1
703	FarSee-Net: Real-Time Semantic Segmentation by Efficient Multi-scale Context Aggregation and Feature Space Super-resolution. 2020 ,	7
702	Real-Time Semantic Stereo Matching. 2020 ,	12
701	PST900: RGB-Thermal Calibration, Dataset and Segmentation Network. 2020 ,	22
700	CCAN: Constraint Co-Attention Network for Instance Grasping. 2020 ,	4
699	Learning Navigation Costs from Demonstration in Partially Observable Environments. 2020 ,	0
698	Efficient Pig Counting in Crowds with Keypoints Tracking and Spatial-aware Temporal Response Filtering. 2020 ,	4
697	MT-DSSD: Deconvolutional Single Shot Detector Using Multi Task Learning for Object Detection, Segmentation, and Grasping Detection. 2020 ,	8

696	A Hierarchical Framework for Collaborative Probabilistic Semantic Mapping. 2020 ,	8
695	ACNN: a Full Resolution DCNN for Medical Image Segmentation. 2020 ,	7
694	Robust 6D Object Pose Estimation by Learning RGB-D Features. 2020 ,	12
693	An Intelligent Spraying System with Deep Learning-based Semantic Segmentation of Fruit Trees in Orchards. 2020 ,	3
692	MufiNet: Multiscale Fusion Residual Networks for Medical Image Segmentation. 2020 ,	1
691	On Matching Finger-Selfies Using Deep Scattering Networks. 2020 , 2, 350-362	6
690	ORDNet: Capturing Omni-Range Dependencies for Scene Parsing. 2020 , PP,	8
689	MSCANet: multiscale context information aggregation network for Tibetan Plateau lake extraction from remote sensing images. 2023 , 16, 1-30	0
688	A State-Of-The-Art Review on Coronary Artery Border Segmentation Algorithms for Intravascular Ultrasound (IVUS) Images.	0
687	CSU-Net: Contour Semantic Segmentation Self-Enhancement for Human Head Detection. 2023 , 11, 987-999	0
686	Performance comparison of deep learning architectures for surgical instrument image removal in gastrointestinal endoscopic imaging.	0
685	3D Minimum Channel Width Distribution in a Ni-Base Superalloy.	0
684	A Multi-View Stereo Algorithm Based on Image Segmentation Guided Generation of Planar Prior for Textureless Regions of Artificial Scenes. 2023 , 1-21	0
683	Lane Detection in Autonomous Vehicles: A Systematic Review. 2023 , 11, 3729-3765	0
682	A deep learning semantic segmentation network with attention mechanism for concrete crack detection. 147592172211261	0
681	Drowsiness Detection Using IoT and Facial Expression. 2023 , 679-692	0
680	SADLN: Self-attention based deep learning network of integrating multi-omics data for cancer subtype recognition. 13,	0
679	Panoramic Panoptic Segmentation: Insights Into Surrounding Parsing for Mobile Agents via Unsupervised Contrastive Learning. 2023 , 1-16	0

678	Edge Detection Guide Network for Semantic Segmentation of Remote-sensing Images. 2023 , 1-1	5
677	Receptive-field and Direction Induced Attention Network for Infrared Dim Small Target Detection with a Large-scale Dataset IRDST. 2023 , 1-1	0
676	A Vision Transformer Approach for Traffic Congestion Prediction in Urban Areas. 2023 , 1-13	1
675	Road Crack Detection Using Deep Neural Network Based on Attention Mechanism and Residual Structure. 2023 , 11, 919-929	0
674	Output Layer Structure Optimization for Weighted Regularized Extreme Learning Machine Based on Binary Method. 2023 , 15, 244	0
673	CNN Model with Multilayer ASPP and Two-Step Cross-Stage for Semantic Segmentation. 2023 , 11, 126	0
672	Automatic Rural Road Centerline Detection and Extraction from Aerial Images for a Forest Fire Decision Support System. 2023 , 15, 271	0
671	Research on the Application of Artificial Intelligence in Public Health Management: Leveraging Artificial Intelligence to Improve COVID-19 CT Image Diagnosis. 2023 , 20, 1158	1
670	Framework for environment perception: Ensemble method for vision-based scene understanding algorithms in agriculture. 9,	0
669	3D bi-directional transformer U-Net for medical image segmentation. 5,	0
668	Enhanced semantic feature pyramid network for small object detection. 2023 , 116919	0
667	Balanced Loss Function for Accurate Surface Defect Segmentation. 2023 , 13, 826	0
666	The Effect of Negative Samples on the Accuracy of Water Body Extraction Using Deep Learning Networks. 2023 , 15, 514	0
665	Multi-Scale Feature Map Aggregation and Supervised Domain Adaptation of Fully Convolutional Networks for Urban Building Footprint Extraction. 2023 , 15, 488	1
664	Co-Training for Unsupervised Domain Adaptation of Semantic Segmentation Models. 2023 , 23, 621	0
663	TransAttention U-Net for Semantic Segmentation of Poppy. 2023 , 12, 487	1
662	Coupling of deep learning and remote sensing: a comprehensive systematic literature review. 2023 , 44, 157-193	1
661	MAD-Net: Multi-attention dense network for functional bone marrow segmentation. 2023 , 106428	0

660	Reaching Motion Planning with Vision-Based Deep Neural Networks for Dual Arm Robots. 2023 , 455-469	0
659	Eres-UNet++: Liver CT image segmentation based on high-efficiency channel attention and Res-UNet++. 2023 , 106501	0
658	Hepatitis B Surface Antigen Intensity Assessment from Immunohistochemical Stained Images Using Hierarchical Nucleus-guided Cytoplasm Grading Method (Preprint).	0
657	Encoder-decoder semantic segmentation models for pressure wound images. 1-12	0
656	FCKDNet: A Feature Condensation Knowledge Distillation Network for Semantic Segmentation. 2023 , 25, 125	0
655	CLC-Net: Contextual and Local Collaborative Network for Lesion Segmentation in Diabetic Retinopathy Images. 2023 ,	0
654	Semi-Supervised Remote Sensing Image Semantic Segmentation Method Based on Deep Learning. 2023 , 12, 348	2
653	RCCT-ASPPNet: Dual-Encoder Remote Image Segmentation Based on Transformer and ASPP. 2023 , 15, 379	1
652	CACPU-Net: Channel attention U-net constrained by point features for crop type mapping. 13,	0
651	Automatic Obstacle Detection Method for the Train Based on Deep Learning. 2023 , 15, 1184	0
650	Channel Correlation Distillation for Compact Semantic Segmentation.	0
649	ELANet: Effective Lightweight Attention-Guided Network for Real-Time Semantic Segmentation.	0
648	Attention Mechanism Enhanced Multi-layer Edge Perception Network for Deep Semantic Medical Segmentation.	0
647	Bridge Crack Segmentation Method Based on Parallel Attention Mechanism and Multi-Scale Features Fusion. 2023 , 74, 6485-6503	0
646	Automatic Marine Debris Inspection. 2023 , 10, 84	0
645	NAUNet: lightweight retinal vessel segmentation network with nested connections and efficient attention.	0
644	A lightweight deep learning network based on knowledge distillation for applications of efficient crack segmentation on embedded devices. 147592172211397	0
643	Difficulty-aware prior-guided hierarchical network for adaptive segmentation of breast tumors. 2023 , 66,	0

- 642 Automatic Pixel-level pavement sealed crack detection using Multi-fusion U-Net network. **2023**, 208, 112475 1
- 641 Large-scale burn severity mapping in multispectral imagery using deep semantic segmentation models. **2023**, 196, 228-240 0
- 640 Using artificial intelligence to support marine macrolitter research: A content analysis and an online database. **2023**, 233, 106466 0
- 639 FDE-net: Frequency-domain enhancement network using dynamic-scale dilated convolution for thyroid nodule segmentation. **2023**, 153, 106514 0
- 638 A novel weakly supervised semantic segmentation framework to improve the resolution of land cover product. **2023**, 196, 73-92 0
- 637 Evaluation of the potential of near infrared hyperspectral imaging for monitoring the invasive brown marmorated stink bug. **2023**, 234, 104751 0
- 636 Synchronous Medical Image Augmentation framework for deep learning-based image segmentation. **2023**, 104, 102161 0
- 635 Building change detection using the parallel spatial-channel attention block and edge-guided deep network. **2023**, 117, 103180 0
- 634 Performance estimation for the memristor-based computing-in-memory implementation of extremely factorized network for real-time and low-power semantic segmentation. **2023**, 160, 202-215 0
- 633 A refinement network embedded with attention mechanism for computer vision based post-earthquake inspections of railway viaduct. **2023**, 279, 115572 0
- 632 Residual attention based uncertainty-guided mean teacher model for semi-supervised breast masses segmentation in 2D ultrasonography. **2023**, 104, 102173 0
- 631 Hybrid convolution and transformer network for coupler fracture failure pattern segmentation recognition in heavy-haul trains. **2023**, 145, 107039 0
- 630 Semantic segmentation of superficial layer in intracoronary optical coherence tomography based on cropping-merging and deep learning. **2023**, 129, 104542 0
- 629 Atrous convolution aided integrated framework for lung nodule segmentation and classification. **2023**, 82, 104527 0
- 628 A deep journey into image enhancement: A survey of current and emerging trends. **2023**, 93, 36-76 0
- 627 Principles of Object Tracking and Mapping. **2023**, 53-84 0
- 626 Evrimli sinir ağları kullanılarak oklu-pozlamaların otomatik birleştirilmesi. 0
- 625 HCD-Mask: a multi-task model for small object detection and instance segmentation in high-resolution UAV images. **2022**, 0

- 624 An Object Aware Hybrid U-Net for Breast Tumour Annotation. **2023**, 87-105 ○
- 623 Brain Stroke Prediction Using Deep Learning: A CNN Approach. **2022**, ○
- 622 MOTSLAM: MOT-assisted monocular dynamic SLAM using single-view depth estimation. **2022**, ○
- 621 Pneumonia Detection using Ensemble of Modified ViT-YOLO Models. **2022**, ○
- 620 DRG-SLAM: A Semantic RGB-D SLAM using Geometric Features for Indoor Dynamic Scene. **2022**, ○
- 619 Panoptic Segmentation Datasets for Rail-based Autonomous Vehicle Under Mixed-traffic Scenario. **2022**, ○
- 618 CFP-SLAM: A Real-time Visual SLAM Based on Coarse-to-Fine Probability in Dynamic Environments. **2022**, ○
- 617 Research on Ground Cloud Image Segmentation Technology Based on Bilateral Feature Fusion. **2022**, ○
- 616 Dynamic-GAN: Learning Spatial-Temporal Attention for Dynamic Object Removal in Feature Dense Environments. **2022**, ○
- 615 dPMP-Deep Probabilistic Motion Planning: A use case in Strawberry Picking Robot. **2022**, ○
- 614 Visualization of Tree Species Identification Using Mask RCNNs for Tropical Forests in Malaysia. **2022**, ○
- 613 Real-Time Semantic Segmentation via an Efficient Multi-Column Network. **2022**, 37, 1478-1491 ○
- 612 Infantile Hemangiomas Segmentation using U-Net and SegNet Architectures Models. **2022**, ○
- 611 Performance Comparison of Backbone Networks for Multi-Tasking in Self-Driving Operations. **2022**, ○
- 610 Survey of images semantic segmentation based on deep learning. **2022**, ○
- 609 Visual illusion cognition dataset construction and recognition performance by deep neural networks. **2022**, ○
- 608 An Efficient End-to-End CNN Network for High-voltage Transmission Line Segmentation. **2022**, ○
- 607 Segformer-Mobilenetv3 fusion coordinate attention mechanism: A lite portrait segmentation network. **2022**, ○

- 606 Flexible ConvNext Block Based Multi-task Learning Framework for Liver MRI Images Analysis. **2022**, ○
- 605 Overcoming Catastrophic Forgetting for Semantic Segmentation Via Incremental Learning. **2022**, ○
- 604 Autoencoder Models Optimization for Remote Sensing Image Semantic Segmentation. **2022**, ○
- 603 FPGA-oriented lightweight multi-modal free-space detection network. 1-21 ○
- 602 Automatic endometrial segmentation in ultrasound images using deep learning. **2022**, ○
- 601 Robust RGB-D SLAM in Dynamic Environments for Autonomous Vehicles. **2022**, ○
- 600 ECU-Net: multi-scale salient boundary detection and contrast feature enhancement U-Net for breast ultrasound image segmentation. ○
- 599 The Applications of Artificial Intelligence in Digestive System Neoplasms: A Review. ○
- 598 An efficient ir approach based semantic segmentation. ○
- 597 GAR-Net: Guided Attention Residual Network for Polyp Segmentation from Colonoscopy Video Frames. **2023**, 13, 123 ○
- 596 Multimodal and Multitemporal Land Use/Land Cover Semantic Segmentation on Sentinel-1 and Sentinel-2 Imagery: An Application on a MultiSenGE Dataset. **2023**, 15, 151 ○
- 595 Recursive model based on U-Net for very short range forecast. **2022**, 23, 2481-2488 ○
- 594 DCS-SLAM: A Semantic SLAM with Moving Cluster towards Dynamic Environments. **2022**, ○
- 593 Ultra-High Resolution Image Segmentation with Efficient Multi-Scale Collective Fusion. **2022**, ○
- 592 XANet: An Efficient Remote Sensing Image Segmentation Model Using Element-Wise Attention Enhancement and Multi-Scale Attention Fusion. **2023**, 15, 236 ○
- 591 Texture-aware Network for Smoke Density Estimation. **2022**, ○
- 590 Advanced bridge visual inspection using real-time machine learning in edge devices. **2022**, 3, ○
- 589 Dam Crack Image Detection Model on Feature Enhancement and Attention Mechanism. **2023**, 15, 64 1

- 588 Road Defect Detection Based on Semantic Transformed Disparity Image Segmentation. **2022,** ○
- 587 Deblurring transformer tracking with conditional cross-attention. ○
- 586 Attention Res-UNet. **2022,** 15, 1-17 ○
- 585 A digital pathology workflow for the segmentation and classification of gastric glands: Study of gastric atrophy and intestinal metaplasia cases. **2022,** 17, e0275232 ○
- 584 Plant Root Phenotyping Using Deep Conditional GANs and Binary Semantic Segmentation. **2023,** 23, 309 ○
- 583 AFL-Net: Attentional Feature Learning Network for Building Extraction from Remote Sensing Images. **2023,** 15, 95 ○
- 582 Dense Semantic Forecasting with Multi-Level Feature Warping. **2023,** 13, 400 ○
- 581 Quantitative assessment of interstitial lung disease based on RDNet convolutional network*. **2022,** ○
- 580 Visual Preference Analysis and Planning Responses Based on Street View Images: A Case Study of Gulangyu Island, China. **2023,** 12, 129 1
- 579 Defect Insulator Detection Method Based on Deep Learning. **2022,** ○
- 578 Depth-Adaptive Deep Neural Network Based on Learning Layer Relevance Weights. **2023,** 13, 398 ○
- 577 AutoML-Based Neural Architecture Search for Object Recognition in Satellite Imagery. **2023,** 15, 91 ○
- 576 Urban localization based on aerial imagery by correcting projection distortion. ○
- 575 Depth Encoding for Neonatal Patient Segmentation. **2022,** ○
- 574 ViFUNet: a Vision Flash based UNet for lung nodules segmentation task. **2022,** ○
- 573 Semantic Segmentation of Landsat Satellite Imagery. **2022,** ○
- 572 Feather Damage Monitoring System Using RGB-Depth-Thermal Model for Chickens. **2023,** 13, 126 ○
- 571 Deep Learning Semantic Segmentation of Feet Using Infrared Thermal Images. **2022,** 342-352 ○

- 570 Road Scene Segmentation Based on Multi-scale Attention Mechanism. **2022**, ○
- 569 Superpixel-Based Multiscale CNN Approach Towards Multiclass Object Segmentation From UAV-Captured Aerial Images. **2023**, 1-14 ○
- 568 Mixed Attention with Deep Supervision for Delineation of COVID Infection in Lung CT. ○
- 567 Deep Learning-Based Segmentation of Cellular Membranes in Colorectal Immunohistochemical Images. ○
- 566 Encoder-decoder network with RMP for tongue segmentation. ○
- 565 Unsupervised domain adaptation semantic segmentation of high-resolution remote sensing imagery with invariant domain-level prototype memory. **2023**, 1-1 ○
- 564 Extraction of small water body information based on Res2Net-Unet. **2023**, ○
- 563 Edge preserved universal pooling: novel strategies for pooling in convolutional neural networks. ○
- 562 Microscopy Cancer Cell Imaging in B-lineage Acute Lymphoblastic Leukemia. **2023**, 1-28 1
- 561 Deep neural networks and advanced computer vision algorithms in the early diagnosis of skin diseases. **2023**, 47-81 ○
- 560 FPGA implementation of the convolution coding method for industrial automation. **2023**, ○
- 559 Semantic Segmentation by Using Down-Sampling and Subpixel Convolution: DSSC-UNet. **2023**, 75, 683-696 ○
- 558 Semantic Segmentation of Degraded Images Using Layer-Wise Feature Adjustor. **2023**, ○
- 557 3D Multiclass Digital Core Models via microCT, SEM-EDS and Deep Learning. **2023**, 366, 01003 ○
- 556 ResAt-UNet: a U-shaped Network Using ResNet and Attention Module for Image Segmentation of Urban Buildings. **2023**, 1-20 ○
- 555 Artificial Intelligence Foundation of Smart Ocean. **2023**, 1-44 ○
- 554 Performance evaluation of CNN-based crack detection for electrical discharge machined steel surfaces. 095440892211464 ○
- 553 Animal Pose Estimation Based on 3D Priors. **2023**, 13, 1466 ○

- 552 Global-first Training Strategy with Convolutional Neural Networks to Improve Scale Invariance. **2023**, 259-278 ○
- 551 Artificial intelligence-assisted colorimetry for urine glucose detection towards enhanced sensitivity, accuracy, resolution, and anti-illuminating capability. ○
- 550 Analyzing the age-friendliness of the urban environment using computer vision methods. 239980832311538 ○
- 549 Semi-autonomous inspection for concrete structures using digital models and a hybrid approach based on deep learning and photogrammetry. ○
- 548 Cooperative Self-Training for Multi-Target Adaptive Semantic Segmentation. **2023**, ○
- 547 Semantic Segmentation with Active Semi-Supervised Learning. **2023**, ○
- 546 Detection of Colorectal Polyps from Colonoscopy Using Machine Learning: A Survey on Modern Techniques. **2023**, 23, 1225 ○
- 545 JAUNet: A U-Shape Network with Jump Attention for Semantic Segmentation of Road Scenes. **2023**, 13, 1493 ○
- 544 Toward Deep-Learning-Based Methods in Image Forgery Detection: A Survey. **2023**, 11, 11224-11237 ○
- 543 A Survey on the Deployability of Semantic Segmentation Networks for Fluvial Navigation. **2023**, ○
- 542 BEGL: boundary enhancement with Gaussian Loss for rock-art image segmentation. **2023**, 11, ○
- 541 Decision-making support system for diagnosis of oncopathologies by histological images. **2023**, 100193 ○
- 540 Cross-scale KNN Image Transformer for Image Restoration. **2023**, 1-1 ○
- 539 Mixed-Type Wafer Failure Pattern Recognition. **2023**, ○
- 538 Computer Stereo Vision for Autonomous Driving: Theory and Algorithms. **2023**, 41-70 ○
- 537 Rice Disease Identification Method Based on Attention Mechanism and Deep Dense Network. **2023**, 12, 508 ○
- 536 Depth and Pixel-Distance Based Attention for Outdoor Semantic Segmentation. **2023**, 11, 8824-8833 ○
- 535 Implementing Predictive Models in Artificial Intelligence through OCT Biomarkers for Age-Related Macular Degeneration. **2023**, 10, 149 ○

534	3D gravity intelligent inversion by U-net network with data augmentation. 2023 , 1-1	1
533	Artificial intelligence in COVID-19. 2023 , 255-273	0
532	Building Extraction from Very High-Resolution Remote Sensing Images using Refine-UNet. 2023 , 1-1	0
531	EBHI-Seg: A novel enteroscope biopsy histopathological hematoxylin and eosin image dataset for image segmentation tasks. 10,	0
530	A Wavelet Driven Subspace Basis Learning Network for High-Resolution Synthetic Aperture Radar Image Classification. 2023 , 1-14	0
529	Multitemporal Feature-Level Fusion on Hyperspectral and LiDAR Data in the Urban Environment. 2023 , 15, 632	2
528	Cognitive State Analysis, Understanding, and Decoding from the Perspective of Brain Connectivity. 2023 , 2733-2767	0
527	IterLUNet: Deep Learning Architecture for Pixel-Wise Crack Detection in Levee Systems. 2023 , 11, 12249-12262	0
526	HiFormer: Hierarchical Multi-scale Representations Using Transformers for Medical Image Segmentation. 2023 ,	2
525	Efficient few-shot learning for pixel-precise handwritten document layout analysis. 2023 ,	0
524	I See-Through You: A Framework for Removing Foreground Occlusion in Both Sparse and Dense Light Field Images. 2023 ,	0
523	DWin-HRFormer: A High-Resolution Transformer Model with Directional Windows for Semantic Segmentation of Urban Construction Land. 2023 , 1-1	0
522	Semantic scene upgrades for trajectory prediction. 2023 , 34,	0
521	Computer-Aided Road Inspection: Systems and Algorithms. 2023 , 13-39	0
520	Composite Learning for Robust and Effective Dense Predictions. 2023 ,	0
519	PRN: Panoptic Refinement Network. 2023 ,	0
518	Optimized Multi-Objective Segnet With Deep Residual Network For Prostate Cancer Segmentation And Detection.	0
517	Recent Progress in Semantic Image Segmentation. 2023 , 12, 61-75	0

516	Embedded Control Gate Fusion and Attention Residual Learning for RGBThermal Urban Scene Parsing. 2023 , 1-10	4
515	Thermal Fault Diagnosis of Electrical Equipment in Substations Using Lightweight Convolutional Neural Network. 2023 , 72, 1-9	0
514	Effect of Road Markings Wear on Accuracy of ZNCC-Based Map Matching. 2023 , 14, 20-26	0
513	A Crack Defect Detection and Segmentation Method That Incorporates Attention Mechanism and Dimensional Decoupling. 2023 , 11, 169	0
512	MISNet: Multiscale Cross-layer Interactive and Similarity Refinement Network for Scene Parsing of Aerial Images. 2023 , 1-11	2
511	IAT: A Full-Scale IVUS Analysis Toolbox Based on Deep Learning Algorithms for Clinical Diagnosis. 2023 , 72, 1-15	0
510	A Synergistical Attention Model for Semantic Segmentation of Remote Sensing Images. 2023 , 1-1	0
509	Multi-level Feature Enhancement and Interaction Network for Remote Sensing Image Semantic Segmentation. 2023 , 5372-5381	0
508	Multi-Scale Fully Convolutional Network-Based Semantic Segmentation for Mobile Robot Navigation. 2023 , 12, 533	1
507	Segmentation: intracardiac echocardiography contouring. 2023 , 89-107	0
506	Hyper Parameter Optimization of CRNN for Printed Devanagari Script Recognition using Taguchi's Method.	0
505	Attention Mechanism Trained with Small Datasets for Biomedical Image Segmentation. 2023 , 12, 682	0
504	Automatic segmentation of abdominal aortic aneurysms from CT angiography using a context-aware cascaded U-Net. 2023 , 106569	0
503	Auto-segmentation of the Tibia and Femur from Knee MR Images via Deep Learning and its Application to Cartilage Strain and Recovery. 2023 , 111473	0
502	AMIO-Net: An attention-based multiscale input-output network for building change detection in high-resolution remote sensing images. 2023 , 1-16	0
501	SDDNet: Infrared small and dim target detection network.	0
500	Deep Learning-Based Acoustic Echo Cancellation for Surround Sound Systems. 2023 , 13, 1266	0
499	Solving Electromagnetic Inverse Scattering Problems in Inhomogeneous Media by Deep Convolutional Encoder-Decoder Structure. 2023 , 1-1	0

498	Attention Based Quick Network With Optical Flow Estimation for Semantic Segmentation. 2023 , 11, 12402-12413	0
497	An Overview of Deep Learning Methods for Left Ventricle Segmentation. 2023 , 2023, 1-26	1
496	Intelligent rock fracture identification based on image semantic segmentation: methodology and application. 2023 , 82,	0
495	Semantic Segmentation in Aerial Imagery Using Multi-level Contrastive Learning with Local Consistency. 2023 ,	0
494	Consistency Regularization for Domain Adaptation. 2023 , 347-359	0
493	RSSFormer: Foreground Saliency Enhancement for Remote Sensing Land-Cover Segmentation. 2023 , 32, 1052-1064	0
492	Dual Parallel Net:A Novel Deep Learning Model for Rectal Tumor Segmentation via CNN and Transformer with Gaussian Mixture Prior. 2023 , 104304	0
491	A Method for 3D Human Pose Estimation and Similarity Calculation in Tai Chi Videos.	0
490	BiTSRS: A Bi-Decoder Transformer Segmentor for High-Spatial-Resolution Remote Sensing Images. 2023 , 15, 840	0
489	UGS-1m: fine-grained urban green space mapping of 31 major cities in China based on the deep learning framework. 2023 , 15, 555-577	0
488	Development of a compressed FCN architecture for semantic segmentation using Particle Swarm Optimization.	0
487	STI-Net: Spatiotemporal integration network for video saliency detection. 2023 , 628, 134-147	0
486	Deep convolution neural network based semantic segmentation for ocean eddy detection. 2023 , 219, 119646	0
485	CRCNet: Global-local context and multi-modality cross attention for polyp segmentation. 2023 , 83, 104593	1
484	Development and deployment of Computer-aided Real-Time feedback for improving quality of colonoscopy in a Multi-Center clinical trial. 2023 , 83, 104609	0
483	Bimodal segmentation and classification of endoscopic ultrasonography images for solid pancreatic tumor. 2023 , 83, 104591	0
482	NMNet: Learning Multi-level semantic information from scale extension domain for improved medical image segmentation. 2023 , 83, 104651	0
481	Research on Raindrop Image Segmentation Method Based on Improved BiSeNet. 2022 ,	0

- 480 Deep Learning Based Architecture Reduction on Camera-Lidar Fusion for Autonomous Vehicles. **2022,** ○
- 479 Multi-type and Multi-level Feature Fusion Network for RGBD Indoor Semantic Segmentation. **2022,** ○
- 478 PG-Net: Point-Graph Convolution Neural Network on Semantic Segmentation of Point clouds. **2022,** ○
- 477 A Study of Remote Sensing Image Ground Segmentation on Deep Learning. **2022,** ○
- 476 Lightweight and Efficient Convolutional Neural Network for Road Scene Semantic Segmentation. **2022,** ○
- 475 Research Advanced in the Image Segmentation. **2022,** ○
- 474 MKIS-Net: A Light-Weight Multi-Kernel Network for Medical Image Segmentation. **2022,** ○
- 473 Semi-Automated Quadrotor Teleoperation by Hierarchical Gesture Control and Visual Perception. **2022,** ○
- 472 SZR5: A Modern Technique to Detect Potholes Using Convolution Neural Network. **2022,** ○
- 471 Vehicle Color Identification Framework using Pixel-level Color Estimation from Segmentation Masks of Car Parts. **2022,** ○
- 470 Det-SLAM: A semantic visual SLAM for highly dynamic scenes using Detectron2. **2022,** ○
- 469 Automatic Individual Tooth Segmentation in Cone-Beam Computed Tomography Based on Multi-Task CNN and Watershed Transform. **2022,** ○
- 468 An optimization method of railway identification based on BiSeNet. **2022,** ○
- 467 Multiple Features Extraction from High Resolution Multi-Spectral Satellite Images using Deep Learning Technique. **2022,** ○
- 466 Improving Fashion Attribute Classification Accuracy with Limited Labeled Data Using Transfer Learning. **2022,** ○
- 465 Retinal Blood Vessel Segmentation and Analysis using Lightweight Spatial Attention based CNN and Data Augmentation. **2022,** ○
- 464 Hidden Feature-Guided Semantic Segmentation Network for Remote Sensing Images. **2023,** 61, 1-17 ○
- 463 Graph Convolutional Neural Networks for Nuclei Segmentation from Histopathology Images. **2023,** 158-169 ○

- 462 Detection of Flood Events from Satellite Images Using Deep Learning. **2023**, 259-268 ○
- 461 DSE-Net: Deep Semantic Enhanced Network for Mobile Tongue Image Segmentation. **2023**, 138-150 ○
- 460 iResSENet: An Accurate Convolutional Neural Network for Retinal Blood Vessel Segmentation. **2023**, 567-578 ○
- 459 Convolutional Neural Network Approach for Iris Segmentation. **2023**, 354-368 ○
- 458 DECANet: DeepLabv3+ DeepLabv3+ DeepLabv3+. **2023**, 60, 0410002 ○
- 457 TransRVNet: LiDAR Semantic Segmentation With Transformer. **2023**, 1-13 ○
- 456 A category-contrastive guided-graph convolutional network approach for the semantic segmentation of point clouds. **2023**, 1-15 ○
- 455 Fully Transformer Network for Change Detection of Remote Sensing Images. **2023**, 75-92 ○
- 454 Brain-Inspired Remote Sensing Interpretation: A Comprehensive Survey. **2023**, 16, 2992-3033 ○
- 453 Cloud Detection From High-Resolution Remote Sensing Images Based on Convolutional Neural Networks With Geographic Features and Contextual Information. **2023**, 20, 1-5 ○
- 452 CFNet: An Eigenvalue Preserved Approach to Multiscale Building Segmentation in High-Resolution Remote Sensing Images. **2023**, 16, 2481-2491 ○
- 451 A unifying review of edge intelligent computing technique applications in the field of energy networks. **2023**, 0-0 ○
- 450 A grape disease identification and severity estimation system. ○
- 449 Recent advances in plant disease severity assessment using convolutional neural networks. **2023**, 13, ○
- 448 WE3DS: An RGB-D Image Dataset for Semantic Segmentation in Agriculture. **2023**, 23, 2713 ○
- 447 A survey of deep learning for MRI brain tumor segmentation methods: Trends, challenges, and future directions. **2023**, 13, 181-201 ○
- 446 Semantic segmentation of urban street scene images based on improved U-Net network. **2023**, 19, 179-185 ○
- 445 EG-TransUNet: a transformer-based U-Net with enhanced and guided models for biomedical image segmentation. **2023**, 24, 1

- 444 Computer vision-based statistical crack quantification for concrete structures. **2023**, 211, 112632 ○
- 443 Towards Predicting Traffic Shockwave Formation and Propagation: A Convolutional EncoderDecoder Network. **2023**, 149, ○
- 442 Processing of micro-CT images of granodiorite rock samples using convolutional neural networks (CNN), Part II: Semantic segmentation using a 2.5D CNN. **2023**, 195, 108027 ○
- 441 Comparison between three convolutional neural networks for local climate zone classification using Google Earth Images: A case study of the Fujian Delta in China. **2023**, 148, 110086 ○
- 440 Segmentation of butterflies from complex agro-ecological images using quantum mechanics and spatial refinement. **2023**, 135, 103968 ○
- 439 Embankment crack detection in UAV images based on efficient channel attention U2Net. **2023**, 50, 430-443 ○
- 438 A spatial-temporal linear feature learning algorithm for P300-based brain-computer interfaces. **2023**, 9, e15380 ○
- 437 Segmentation of farmlands in aerial images by deep learning framework with feature fusion and context aggregation modules. ○
- 436 A Semantic Segmentation Algorithm for Intelligent Sweeper Vehicle Garbage Recognition Based on Improved U-net. ○
- 435 High temporal frequency vehicle counting from low-resolution satellite images. **2023**, 198, 45-59 ○
- 434 On the Analyses of Medical Images Using Traditional Machine Learning Techniques and Convolutional Neural Networks. ○
- 433 GL-Segnet: Global-Local representation learning net for medical image segmentation. 17, ○
- 432 MSFA-Net: A convolutional neural network based on multispectral filter arrays for texture feature extraction. **2023**, 168, 93-99 ○
- 431 An Efficient Compression Method for Lightning Electromagnetic Pulse Signal Based on Convolutional Neural Network and Autoencoder. **2023**, 23, 3908 ○
- 430 OverSegNet: A convolutional encoderdecoder network for image over-segmentation. **2023**, 107, 108610 ○
- 429 MSA-Net: Multiscale spatial attention network for medical image segmentation. **2023**, 70, 453-473 ○
- 428 A review of deep learning-based multiple-lesion recognition from medical images: classification, detection and segmentation. **2023**, 157, 106726 ○
- 427 Simple and robust depth-wise cascaded network for polyp segmentation. **2023**, 121, 106023 ○

- 426 Deep learning-based visual detection of marine organisms: A survey. **2023**, 532, 1-32 ○
- 425 Multi-stage context refinement network for semantic segmentation. **2023**, 535, 53-63 ○
- 424 DRFN: A unified framework for complex document layout analysis. **2023**, 60, 103339 ○
- 423 THCANet: Two-layer hop cascaded asymptotic network for robot-driving road-scene semantic segmentation in RGB-D images. **2023**, 136, 104011 ○
- 422 Adversarial co-training for semantic segmentation over medical images. **2023**, 157, 106736 ○
- 421 Uncertainty quantification analysis for simulation of wakes in wind-farms using a stochastic RANS solver, compared with a deep learning approach. **2023**, 257, 105867 ○
- 420 Orientation Attention Network for semantic segmentation of remote sensing images. **2023**, 267, 110415 ○
- 419 FeDNet: Feature Decoupled Network for polyp segmentation from endoscopy images. **2023**, 83, 104699 ○
- 418 An imbalance-aware nuclei segmentation methodology for H&E stained histopathology images. **2023**, 83, 104720 ○
- 417 Scan2Drawing: Use of Deep Learning for As-Built Model Landscape Architecture. **2023**, 149, ○
- 416 Extraction of vascular wall in carotid ultrasound via a novel boundary-delineation network. **2023**, 121, 106069 ○
- 415 Helium focused ion beam induced subsurface damage on Si and SiC substrates: experiments and generative deep neural network modeling via position-dependent input. **2023**, 24, 3363-3382 ○
- 414 SDDC-Net: A U-shaped deep spiking neural P convolutional network for retinal vessel segmentation. **2023**, 136, 104002 1
- 413 Positive-negative equal contrastive loss for semantic segmentation. **2023**, 535, 13-24 ○
- 412 A method for identifying grape stems using keypoints. **2023**, 209, 107825 ○
- 411 Simulation of unsteady flow around bluff bodies using knowledge-enhanced convolutional neural network. **2023**, 236, 105405 ○
- 410 A sub-region Unet for weak defects segmentation with global information and mask-aware loss. **2023**, 122, 106011 ○
- 409 A hybrid deep learning pavement crack semantic segmentation. **2023**, 122, 106142 ○

- 408 RSBNet: One-shot neural architecture search for a backbone network in remote sensing image recognition. **2023**, 537, 110-127 ○
- 407 A state-of-the-art survey of welding radiographic image analysis: Challenges, technologies and applications. **2023**, 214, 112821 ○
- 406 Scanline intersection similarity: A similarity metric for joint trace maps. **2023**, 175, 105358 ○
- 405 AMCC-Net: An asymmetric multi-cross convolution for skin lesion segmentation on dermoscopic images. **2023**, 122, 106154 ○
- 404 Multi-scale triple-attention network for pixelwise crack segmentation. **2023**, 150, 104853 ○
- 403 DSEU-net: A novel deep supervision SEU-net for medical ultrasound image segmentation. **2023**, 223, 119939 ○
- 402 PY-Net: Rethinking segmentation frameworks with dense pyramidal operations for optic disc and cup segmentation from retinal fundus images. **2023**, 85, 104895 ○
- 401 Deep learning technology for construction machinery and robotics. **2023**, 150, 104852 ○
- 400 Lightweight convolutional neural network models for semantic segmentation of in-field cotton bolls. **2023**, 8, 1-19 ○
- 399 Image segmentation of adhesive ores based on MSBA-Unet and convex-hull defect detection. **2023**, 123, 106185 ○
- 398 Glioma brain tumor detection using dual convolutional neural networks and histogram density segmentation algorithm. **2023**, 85, 104859 ○
- 397 Unbiased feature position alignment for human pose estimation. **2023**, 537, 152-163 ○
- 396 A framework to estimate generating capacities of PV systems using satellite imagery segmentation. **2023**, 123, 106186 ○
- 395 A facial geometry based detection model for face manipulation using CNN-LSTM architecture. **2023**, 633, 370-383 ○
- 394 Transformers in medical image segmentation: A review. **2023**, 84, 104791 ○
- 393 Automated diagnosis of Retinopathy of prematurity from retinal images of preterm infants using hybrid deep learning techniques. **2023**, 85, 104883 1
- 392 MAF-Net: A multi-scale attention fusion network for automatic surgical instrument segmentation. **2023**, 85, 104912 ○
- 391 A real-time semantic segmentation model using iteratively shared features in multiple sub-encoders. **2023**, 140, 109557 ○

- 390 Coronary Artery Segmentation from X-ray Angiographic Images using Width-aware U-Net. **2022**, ○
- 389 Deep Learning on Knee CT Scans from Osteoarthritis Patients for Joint Space Assessment. **2022**, ○
- 388 Graph Structure Guided Transformer for Semantic Segmentation. **2022**, ○
- 387 Real-time efficient semantic segmentation network based on improved ASPP and parallel fusion module in complex scenes. **2023**, 20, ○
- 386 BiSeNet V3: Bilateral segmentation network with coordinate attention for real-time semantic segmentation. **2023**, 532, 33-42 ○
- 385 A real-time computer-aided diagnosis method for hydatidiform mole recognition using deep neural network. **2023**, 234, 107510 ○
- 384 DCA-Net: Dual-branch contextual-aware network for auxiliary localization and segmentation of parathyroid glands. **2023**, 84, 104856 ○
- 383 Multi-path decoder U-Net: A weakly trained real-time segmentation network for object detection and localization in ultrasound scans. **2023**, 107, 102205 ○
- 382 Extracting interpretable features for time series analysis: A Bag-of-Functions approach. **2023**, 221, 119787 ○
- 381 Applications of deep learning in single-cell analysis. ○
- 380 Deep Learning for Analyzing Power Delivery Networks and Thermal Networks. **2022**, 115-150 ○
- 379 A CAD System for Lung Cancer Detection Using Chest X-ray: A Review. **2022**, 12-25 ○
- 378 Improving anisotropy resolution of computed tomography and annotation using 3D super-resolution network. **2023**, 82, 104590 ○
- 377 Semantic-Structure-Aware Multi-Level Information Fusion for Robust Global Orientation Optimization of Autonomous Mobile Robots. **2023**, 23, 1125 ○
- 376 Dual Context Network for real-time semantic segmentation. **2023**, 34, ○
- 375 Comparing conventional manual measurement of the green view index with modern automatic methods using google street view and semantic segmentation. **2023**, 80, 127845 ○
- 374 Rapidly predicting the effect of tool geometry on the wrinkling of biaxial NCFs during composites manufacturing using a deep learning surrogate model. **2023**, 253, 110536 ○
- 373 Brain tumor segmentation of the FLAIR MRI images using novel ResUnet. **2023**, 82, 104586 ○

- 372 TANet: Triple Attention Network for medical image segmentation. **2023**, 82, 104608 ○
- 371 Semi-supervised visual anomaly detection based on convolutional autoencoder and transfer learning. **2023**, 11, 100451 ○
- 370 CFPNet-M: A light-weight encoder-decoder based network for multimodal biomedical image real-time segmentation. **2023**, 154, 106579 ○
- 369 Attention-guided siamese networks for change detection in high resolution remote sensing images. **2023**, 117, 103206 ○
- 368 Error-Correcting Mean-Teacher: Corrections instead of consistency-targets applied to semi-supervised medical image segmentation. **2023**, 154, 106585 ○
- 367 An Interpretable Deep Semantic Segmentation Method for Earth Observation. **2022**, ○
- 366 ClusterSeg: A crowd cluster pinpointed nucleus segmentation framework with cross-modality datasets. **2023**, 85, 102758 ○
- 365 MatPhase: Material phase prediction for Li-ion Battery Reconstruction using Hierarchical Curriculum Learning. **2022**, ○
- 364 Effective Deep Learning-Based Ensemble Model for Road Crack Detection. **2022**, ○
- 363 Dilated convolution network with edge fusion block and directional feature maps for cardiac MRI segmentation. 14, ○
- 362 Comparative Analysis of Different CNN Models for Building Segmentation from Satellite and UAV Images. **2023**, 89, 97-105 ○
- 361 A Lightweight Network for Real-Time Target Semantic Segmentation Based on Dual Paths. **2022**, ○
- 360 Dynamic scene SLAM algorithm based on semantic information and joint constraints of optical flow and geometry. **2022**, ○
- 359 DPPS: A deep-learning based point-light photometric stereo method for 3D reconstruction of metallic surfaces. **2023**, 210, 112543 ○
- 358 Fault Detection of Valve Based on 2D Localization and 3D Pose Solution. **2022**, ○
- 357 Fully Complex-valued Fully Convolutional Multi-feature Fusion Network(FC2MFN) for Building Segmentation of InSAR images. **2022**, ○
- 356 Genetic Algorithms for Optimising Context-based Neural Networks for Image Segmentation. **2022**, ○
- 355 Learning from coarsely-labeled images for semantic segmentation. **2022**, ○

- 354 Object Detection on Scene Images: A Novel Approach. **2023**, 218, 153-163 ○
- 353 MFTTransNet: A Multi-Modal Fusion with CNN-Transformer Network for Semantic Segmentation of HSR Remote Sensing Images. **2023**, 11, 722 ○
- 352 OCTOPUS [Optical coherence tomography plaque and stent analysis software. **2023**, 9, e13396 1
- 351 Fractional derivative based weighted skip connections for satellite image road segmentation. **2023**, 161, 142-153 ○
- 350 An Attention-Based Uncertainty Revising Network with Multi-Loss for Environmental Microorganism Segmentation. **2023**, 12, 763 ○
- 349 Research on land cover type classification method based on improved MaskFormer for remote sensing images. 9, e1222 ○
- 348 Lane Marker Detection Based on Multihead Self-Attention. **2023**, 2023, 1-9 ○
- 347 M-Net: An encoder-decoder architecture for medical image analysis using ensemble learning. **2023**, 17, 100927 ○
- 346 DIR-SLAM: Dynamic Interference Removal for Real-Time VSLAM in Dynamic Environments. **2023**, 2023, 1-12 ○
- 345 Semantics recalibration and detail enhancement network for real-time semantic segmentation. ○
- 344 Deep Learning for Image Segmentation: A Focus on Medical Imaging. **2023**, 75, 1995-2024 ○
- 343 A Medical Image Segmentation Method Based on Improved UNet 3+ Network. **2023**, 13, 576 ○
- 342 BirdSoundsDenoising: Deep Visual Audio Denoising for Bird Sounds. **2023**, ○
- 341 A Standardized Approach for Skin Detection: Analysis of the Literature and Case Studies. **2023**, 9, 35 ○
- 340 Bird-Eye View Semantic Segmentation and Voxel Semantic Segmentation Based on Frustum Voxel Modeling and Monocular Camera. **2023**, 28, 100-113 ○
- 339 Remote Sensing Image Scene Classification: Advances and Open Challenges. **2023**, 3, 137-155 ○
- 338 FASFLNet: feature adaptive selection and fusion lightweight network for RGB-D indoor scene parsing. **2023**, 31, 8029 ○
- 337 Towards Edge-Precise Cloud and Shadow Detection on the GaoFen-1 Dataset: A Visual, Comprehensive Investigation. **2023**, 15, 906 ○

- 336 Research of Land Surface Segmentation based on Convolutional Network and Transformer Network. **2022,** ○
- 335 TGSNet: Multi-Field Feature Fusion for Glass Region Segmentation Using Transformers. **2023, 11, 843** ○
- 334 Towards ℓ_1 Regularization for Deep Neural Networks: Model Sparsity Versus Task Difficulty. **2022,** ○
- 333 An Efficient Pick-and-Place Pipeline based on Quantized Segmentation. **2022,** ○
- 332 A Dynamic Scene Vision SLAM Method Incorporating Object Detection and Object Characterization. **2023, 15, 3048** ○
- 331 CLELNet: A continual learning network for esophageal lesion analysis on endoscopic images. **2023, 231, 107399** ○
- 330 Better feature extraction using multi-encoder convolutional neural networks for optic cup segmentation from digital fundus images. **2023, 39, 51-63** ○
- 329 Image Analysis System for Early Detection of Cardiothoracic Surgery Wound Alterations Based on Artificial Intelligence Models. **2023, 13, 2120** ○
- 328 A two-stream crack detection model based on SegNet. **2022,** ○
- 327 EfferDeepNet: An Efficient Semantic Segmentation Method for Outdoor Terrain. **2023, 11, 256** ○
- 326 AI Based Deepfake Detection. **2022,** ○
- 325 Improving Performance of Psoriasis Lesion Segmentation Using Attention-UNet with EfficientNet Encoder. **2022,** ○
- 324 HC-Net: A hybrid convolutional network for non-human primate brain extraction. 17, ○
- 323 Automated identification of fissure trace in mining roadway via deep learning. **2023,** ○
- 322 Rethinking 1D convolution for lightweight semantic segmentation. 17, ○
- 321 Crowd Density Estimation and Mapping Method Based on Surveillance Video and GIS. **2023, 12, 56** ○
- 320 Semantic Segmentation for Digital Archives of Borobudur Reliefs Based on Soft-Edge Enhanced Deep Learning. **2023, 15, 956** ○
- 319 Precision Detection and Assessment of Ash Death and Decline Caused by the Emerald Ash Borer Using Drones and Deep Learning. **2023, 12, 798** ○

318	Semantic segmentation of agricultural images: A survey. 2023 ,	o
317	Optimized Hybrid Focal Margin Loss for Crack Segmentation. 2022 ,	o
316	Self-training adversarial learning for cross-domain retinal OCT fluid segmentation. 2023 , 155, 106650	o
315	Automated Tire visual inspection based on low rank matrix recovery.	o
314	Pixel-Level Concrete Crack Segmentation Using Pyramidal Residual Network with Omni-Dimensional Dynamic Convolution. 2023 , 11, 546	1
313	Dense Multiscale Feature Learning Transformer Embedding Cross-Shaped Attention for Road Damage Detection. 2023 , 12, 898	1
312	Adversarial Attacks against a Satellite-borne Multispectral Cloud Detector. 2022 ,	o
311	SC-CrackSeg: A Real-time Shared Feature Pyramid Network for Crack Detection and Segmentation. 2022 ,	o
310	Multi-directional feature refinement network for real-time semantic segmentation in urban street scenes.	o
309	High level structure recognition in single urban images using a CNN and SuperPixels.	o
308	Improvement of Concrete Crack Segmentation Performance Using Stacking Ensemble Learning. 2023 , 13, 2367	o
307	Augmented FCN: rethinking context modeling for semantic segmentation. 2023 , 66,	o
306	Study and Implementation of U-Net Encoder-Decoder Neural Network for Brain Tumors Segmentation. 2023 , 448-456	o
305	Lossless Reconstruction of Convolutional Neural Network for Channel-Based Network Pruning. 2023 , 23, 2102	o
304	Learning 3D Semantics From Pose-Noisy 2D Images with Hierarchical Full Attention Network. 2023 , 726-742	o
303	Multi-scale-ResUNet: an improve u-net with multi-scale attention and hybrid dilation for medical image segmentation.	o
302	Correlating Edge with Parsing for Human Parsing. 2023 , 12, 944	o
301	Sustainable Analysis of Insulator Fault Detection Based on Fine-Grained Visual Optimization. 2023 , 15, 3456	o

- 300 A Vision Based Multi-robot Cooperative Semantic SLAM Algorithm. **2022**, 0
- 299 Implementation of improved RGBD 3D target detection model based on FPGA heterogeneous computing architecture. **2022**, 0
- 298 In-field rice panicles detection and growth stages recognition based on RiceRes2Net. **2023**, 206, 107704 0
- 297 RoadFormer: Road Extraction Using a Swin Transformer Combined with a Spatial and Channel Separable Convolution. **2023**, 15, 1049 1
- 296 Object-aware data association for the semantically constrained visual SLAM. **2023**, 16, 155-176 0
- 295 Fuzzy neighbourhood neural network for high-resolution remote sensing image segmentation. **2023**, 56, 0
- 294 Road segmentation from satellite images using FCNN for autonomous driving vehicles. **2022**, 0
- 293 SPANet: Spatial Adaptive Convolution Based Content-Aware Network for Aerial Image Semantic Segmentation. **2023**, 16, 2192-2204 0
- 292 Saliency Detection From 4D Light Field Images Using an Optimized CNN-based Hybrid Model. **2022**, 0
- 291 Adjacent Bi-Hierarchical Network for Scene Parsing of Remote Sensing Images. **2023**, 20, 1-5 2
- 290 A Lightweight Network with Lane Feature Enhancement for Multilane Drivable Area Detection. **2022**, 0
- 289 Forest Segmentation with Spatial Pyramid Pooling Modules: A Surveillance System Based on Satellite Images. **2023**, 14, 405 0
- 288 Effects of Image Size on Deep Learning. **2023**, 12, 985 0
- 287 Fast Attention CNN for Fine-Grained Crack Segmentation. **2023**, 23, 2244 0
- 286 Segmentation of the aorta in systolic phase from 4D flow MRI: multi-atlas vs. deep learning. 0
- 285 PDRF-Net: a progressive dense residual fusion network for COVID-19 lung CT image segmentation. 0
- 284 BG-Net: boundary-guidance network for object consistency maintaining in semantic segmentation. 0
- 283 A method of cotton root segmentation based on edge devices. 14, 0

282	Top-K Confidence Map Aggregation for Robust Semantic Segmentation Against Unexpected Degradation. 2023 ,	0
281	On the Design of Privacy-Aware Cameras: A Study on Deep Neural Networks. 2023 , 223-237	0
280	CTFuseNet: A Multi-Scale CNN-Transformer Feature Fused Network for Crop Type Segmentation on UAV Remote Sensing Imagery. 2023 , 15, 1151	0
279	MMCAN: Multi-Modal Cross-Attention Network for Free-Space Detection with Uncalibrated Hyperspectral Sensors. 2023 , 15, 1142	0
278	Deep learning ensemble 2D CNN approach towards the detection of lung cancer. 2023 , 13,	0
277	Detection of Sargassum from Sentinel Satellite Sensors Using Deep Learning Approach. 2023 , 15, 1104	0
276	An Atrous Convolved Hybrid Seg-Net Model with residual and attention mechanism for gland detection and segmentation in histopathological images. 2023 , 155, 106690	1
275	An Improved Visual SLAM Based on Map Point Reliability under Dynamic Environments. 2023 , 13, 2712	1
274	CCTseg: A cascade composite transformer semantic segmentation network for UAV visual perception. 2023 , 211, 112612	0
273	IS-Net: Automatic Ischemic Stroke Lesion Segmentation on CT Images. 2023 , 1-1	0
272	WRA-Net: Wide Receptive Field Attention Network for Motion Deblurring in Crop and Weed Image. 2023 , 5,	0
271	Predicting Individual Traits From T1-weighted Anatomical MRI Using the Xception CNN Architecture.	0
270	5G-Based Real-Time Remote Inspection Support. 2023 , 12, 1082	0
269	MCC-Net: A class attention-enhanced multi-scale model for internal structure segmentation of rice seedling stem. 2023 , 207, 107717	0
268	Human Vision Attention Mechanism-Inspired Temporal-Spatial Feature Pyramid for Video Saliency Detection.	0
267	Robust detection of headland boundary in paddy fields from continuous RGB-D images using hybrid deep neural networks. 2023 , 207, 107713	0
266	Clinical applications of deep learning in breast MRI. 2023 , 1878, 188864	0
265	Intelligent identification of pavement cracks based on PSA-Net. 11,	0

- 264 Segmentation of Cerebral Hemorrhage CT Images using Swin Transformer and HarDNet. **2023**, ○
- 263 Hybrid Convolutional Neural Network Method for Robust Brain Stroke Diagnosis and Segmentation. **2022**, 10, 410-418 ○
- 262 PCCA-Model: an attention module for medical image segmentation. **2023**, 14, 1428 ○
- 261 Scene identification using visual semantic segmentation and supplementary classifier for resource-constrained edge systems. **2023**, ○
- 260 Autonomous and online detection of dry areas on a boiling surface using deep learning and infrared thermometry. **2023**, 145, 110879 ○
- 259 Efficient Color Image Segmentation of Low Light and Night Time Image Enhancement Using Novel 2DTU-Net and FM2CM Segmentation Algorithm. **2023**, 285-295 ○
- 258 Computer-aided fish assessment in an underwater marine environment using parallel and progressive spatial information fusion. **2023**, 35, 211-226 ○
- 257 Recognition of sunflower growth period based on deep learning from UAV remote sensing images. ○
- 256 Synthetic Datasets for Rebar Instance Segmentation Using Mask R-CNN. **2023**, 13, 585 ○
- 255 Artificial intelligence and digital biomarker in precision pathology guiding immune therapy selection and precision oncology. ○
- 254 Optimization RGB-D 3-D Reconstruction Algorithm Based on Dynamic SLAM. **2023**, 72, 1-13 ○
- 253 An accurate shared bicycle detection network based on faster R-CNN. ○
- 252 Transformer-Based Cross-Modal Information Fusion Network for Semantic Segmentation. ○
- 251 Automatic measurement of exophthalmos based orbital CT images using deep learning. 11, ○
- 250 A semantic segmentation-based collision recognition method for motorcycle slalom through poles in Motorcycle Driving License Test. **2023**, 55, 101912 ○
- 249 Cloud detection of high-resolution remote sensing image based on improved U-Net. ○
- 248 Pulsed Thermography Dataset for Training Deep Learning Models. **2023**, 13, 2901 ○
- 247 RA-DENet: Reverse Attention and Distractions Elimination Network for polyp segmentation. **2023**, 155, 106704 ○

- 246 High-Speed Semantic Segmentation Based on Dual-Path Feature Fusion Codec Structure. **2022**, 34, 1911-1919 ○
- 245 A Lightweight 3D Segmentation Network for Abdominal Liver in CT Image. **2022**, ○
- 244 Multitask GANs for Oil Spill Classification and Semantic Segmentation Based on SAR Images. **2023**, 16, 2532-2546 ○
- 243 Swin-UperNet: A Semantic Segmentation Model for Mangroves and *Spartina alterniflora* Loisel Based on UperNet. **2023**, 12, 1111 ○
- 242 Multi-Attention Segmentation Networks Combined with the Sobel Operator for Medical Images. **2023**, 23, 2546 ○
- 241 Computer Vision Method for In Situ Measuring Forming Accuracy of 3D Sand Mold Printing. **2023**, 11, 330 ○
- 240 Scene Parsing via Tree Structure Enhancement Lightweight Network. **2022**, ○
- 239 High-Order Semantic Decoupling Network for Remote Sensing Image Semantic Segmentation. **2023**, 61, 1-15 ○
- 238 MDA GAN: Adversarial-Learning-Based 3-D Seismic Data Interpolation and Reconstruction for Complex Missing. **2023**, 61, 1-14 ○
- 237 Artificial intelligence for vascular lesions. **2023**, 149-162 ○
- 236 MMPL-Net: multi-modal prototype learning for one-shot RGB-D segmentation. ○
- 235 Deep Learning-Based Segmentation of 3D Volumetric Image and Microstructural Analysis. **2023**, 23, 2640 ○
- 234 Data mining and forecasting of pavement strength depending on the composition of asphalt concrete mix. **2023**, 371, 04013 ○
- 233 Eczema Skin Lesions Segmentation Using Deep Neural Network (U-Net). **2023**, 229-262 ○
- 232 Complex-Valued U-Net with Capsule Embedded for Semantic Segmentation of PolSAR Image. **2023**, 15, 1371 ○
- 231 A survey of maritime vision datasets. ○
- 230 A Semi-Supervised Approach to Cell Nuclei Segmentation. **2022**, ○
- 229 MAFF-HRNet: Multi-Attention Feature Fusion HRNet for Building Segmentation in Remote Sensing Images. **2023**, 15, 1382 ○

- 228 Clinically Relevant Myocardium Segmentation in Cardiac Magnetic Resonance Images. **2023**, 1-9 ○
- 227 Improving Semantic Segmentation under Hazy Weather for Autonomous Vehicles Using Explainable Artificial Intelligence and Adaptive Dehazing Approach. **2023**, 1-1 ○
- 226 DensePPMUNet-a: A Robust Deep Learning Network for Segmenting Water Bodies From Aerial Images. **2023**, 61, 1-11 ○
- 225 Semantic Segmentation for Identifying Road Surface Damages Using Lightweight Encoder-Decoder Network. **2022**, ○
- 224 Deep Learning-Based Single-Image Super-Resolution: A Comprehensive Review. **2023**, 11, 21811-21830 ○
- 223 A decoupled search deep network framework for high-resolution remote sensing image classification. **2023**, 14, 243-253 ○
- 222 Techniques and Challenges of Image Segmentation: A Review. **2023**, 12, 1199 ○
- 221 Deep Learning-Based Multiscale Pyramid Sieve and Analysis Module in Image Segmentation. **2023**, 11, 22307-22319 ○
- 220 A Meal-Assistance Robot System for Asian Food and Its Food Acquisition Point Estimation and User Interface Based on Face Recognition. **2023**, 13, 3216 ○
- 219 Deep learning approaches for the retinal vasculature segmentation in fundus images. **2023**, 139-155 ○
- 218 Conditional random field-recurrent neural network segmentation with optimized deep learning for brain tumour classification using magnetic resonance imaging. 1-22 ○
- 217 Deep Learning Techniques for Quantification of Tumour Necrosis in Post-neoadjuvant Chemotherapy Osteosarcoma Resection Specimens for Effective Treatment Planning. **2023**, 12, 87-103 ○
- 216 Sensitivity Analysis of Parameters of U-Net Model for Semantic Segmentation of Silt Storage Dams from Remote Sensing Images. **2023**, 49, ○
- 215 Inferior Alveolar Canal Automatic Detection with Deep Learning CNNs on CBCTs: Development of a Novel Model and Release of Open-Source Dataset and Algorithm. **2023**, 13, 3271 ○
- 214 Global Feature Attention Network: Addressing the Threat of Adversarial Attack for Aerial Image Semantic Segmentation. **2023**, 15, 1325 ○
- 213 DMAU-Net: An Attention-Based Multiscale Max-Pooling Dense Network for the Semantic Segmentation in VHR Remote-Sensing Images. **2023**, 15, 1328 ○
- 212 A Survey of Image Semantic Segmentation Algorithm Based on Deep Learning. **2023**, 5, 13-14 ○
- 211 PCB Defect Detection Based on Deep Learning Algorithm. **2023**, 11, 775 1

210	Semantic Communities from Graph-Inspired Visual Representations of Cityscapes. 2023 , 4, 110-122	0
209	Deep learning-based technique for lesions segmentation in CT scan images for COVID-19 prediction.	0
208	VEDAM: Urban Vegetation Extraction Based on Deep Attention Model from High-Resolution Satellite Images. 2023 , 12, 1215	0
207	GLAN: GAN Assisted Lightweight Attention Network for Biomedical Imaging Based Diagnostics.	1
206	NST: A nuclei segmentation method based on transformer for gastrointestinal cancer pathological images. 2023 , 84, 104785	0
205	Edge Detection With Direction Guided Postprocessing for Farmland Parcel Extraction. 2023 , 16, 3760-3770	0
204	Automatic detection of photovoltaic facilities from Sentinel-2 observations by the enhanced U-Net method. 2023 , 17,	0
203	Semantic Segmentation of Digestive Abnormalities from WCE Images by Using AttResU-Net Architecture. 2023 , 13, 719	0
202	Rural Building Extraction Based on Joint U-Net and the Generalized Chinese Restaurant Franchise from Remote Sensing Images. 2023 , 15, 4685	0
201	Aerial Image Segmentation via 'Noise Dispelling and'Content Distilling. 2023 , 269-279	0
200	TransCAM: Transformer attention-based CAM refinement for Weakly supervised semantic segmentation. 2023 , 92, 103800	0
199	MashFormer: A Novel Multiscale Aware Hybrid Detector for Remote Sensing Object Detection. 2023 , 16, 2753-2763	0
198	A graph-based edge attention gate medical image segmentation method.	0
197	SMA-Net: Sobel Operator Combined with 'Multi-attention Networks for 'COVID-19 Lesion Segmentation. 2023 , 377-390	0
196	Deep Learning-based Road Segmentation & Pedestrian Detection System for Intelligent Vehicles.	0
195	Towards smart pruning: ViNet, a deep-learning approach for grapevine structure estimation. 2023 , 207, 107736	0
194	ASA-DRNet: An Improved Deeplabv3+ Framework for SAR Image Segmentation. 2023 , 12, 1300	0
193	First-Break Picking Method Based on the Difference Between Multiwindow Energy Ratios. 2023 , 61, 1-10	0

- 192 Semi-supervised Semantic Segmentation with Uncertainty-Guided Self Cross Supervision. **2023**, 327-343 ○
- 191 Reliability analysis of heat source layout temperature field prediction considering uncertainty in deep neural network surrogate models. ○
- 190 BzierSeg: Parametric Shape Representation for Fast Object Segmentation in Medical Images. **2023**, 13, 743 ○
- 189 A Review on Few-shot Learning for Medical Image Segmentation. **2023**, ○
- 188 Application of Multi-modal Fusion Attention Mechanism in Semantic Segmentation. **2023**, 378-397 ○
- 187 An Enhanced Multi-Objective-Derived Adaptive DeepLabv3 Using G-RDA for Semantic Segmentation of Aerial Images. ○
- 186 MAE-BG: dual-stream boundary optimization for remote sensing image semantic segmentation. **2023**, 38, ○
- 185 Quantifying the Effects of Ground Truth Annotation Quality on Object Detection and Instance Segmentation Performance. **2023**, 11, 25174-25188 ○
- 184 Cultivated land recognition from remote sensing images based on improved deeplabv3 model. **2022**, ○
- 183 Classification of brain tumor using a multistage approach based on RELM and MLBP. **2023**, 8, e4 ○
- 182 Double Branch Parallel Network for Segmentation of Buildings and Waters in Remote Sensing Images. **2023**, 15, 1536 ○
- 181 A semantic segmentation algorithm for fashion images based on modified mask RCNN. ○
- 180 DbCrackNet: Dual-branch network for crack segmentation. **2022**, ○
- 179 RGB-D SLAM Based on Semantic and Geometry for Indoor Dynamic Environments. **2022**, ○
- 178 DA-FPN: Deformable Convolution and Feature Alignment for Object Detection. **2023**, 12, 1354 ○
- 177 Water Stream Extraction via Feature-Fused Encoder-Decoder Network Based on SAR Images. **2023**, 15, 1559 ○
- 176 Multi-Attention-Based Semantic Segmentation Network for Land Cover Remote Sensing Images. **2023**, 12, 1347 ○
- 175 HMT-Net: Transformer and MLP Hybrid Encoder for Skin Disease Segmentation. **2023**, 23, 3067 ○

- 174 Salient Semantic Segmentation Based on RGB-D Camera for Robot Semantic Mapping. **2023**, 13, 3576 ○
- 173 Machine learning-based automated sponge cytology for screening of oesophageal squamous cell carcinoma and adenocarcinoma of the oesophagogastric junction: a nationwide, multicohort, prospective study. **2023**, 8, 432-445 ○
- 172 A Lightweight Highway Pavement Crack Detection Technology and Its Application. **2022**, ○
- 171 Two-Stage Framework for Faster Semantic Segmentation. **2023**, 23, 3092 ○
- 170 Faster SCDNet: Real-Time Semantic Segmentation Network with Split Connection and Flexible Dilated Convolution. **2023**, 23, 3112 ○
- 169 Convolutional Neural Networks (CNN) based Brain Tumor Detection in MRI Images. **2023**, ○
- 168 Brain Tumour Segmentation Using S-Net and SA-Net. **2023**, 11, 28658-28679 ○
- 167 Automatic segmentation of thyroid with the assistance of the devised boundary improvement based on multicomponent small dataset. ○
- 166 Semantic Segmentation of High-Resolution Remote Sensing Images Based on Sparse Self-Attention and Feature Alignment. **2023**, 15, 1598 ○
- 165 Sci-Net: scale-invariant model for buildings segmentation from aerial imagery. 1
- 164 Deep Learning-Based Improved Automatic Building Extraction from Open-Source High Resolution Unmanned Aerial Vehicle (UAV) Imagery. **2023**, 51-66 ○
- 163 Cloud Mesoscale Cellular Classification and Diurnal Cycle Using a Convolutional Neural Network (CNN). **2023**, 15, 1607 ○
- 162 Semantic segmentation for fully automated macrofouling analysis on coatings after field exposure. **2023**, 39, 64-79 ○
- 161 Fused deep neural networks for sustainable and computational management of heat-transfer pipeline diagnosis. **2023**, 14, 100144 ○
- 160 Identification of Soybean Planting Areas Combining Fused Gaofen-1 Image Data and U-Net Model. **2023**, 13, 863 ○
- 159 Detection of Bridge Damages by Image Processing Using the Deep Learning Transformer Model. **2023**, 13, 788 ○
- 158 DenseResSegnet: A Dense Residual Segnet for Road Detection Using Remote Sensing Images. **2023**, ○
- 157 EDPNet: An EncodingDecoding Network with Pyramidal Representation for Semantic Image Segmentation. **2023**, 23, 3205 ○

- 156 An Improved Co-Training and Generative Adversarial Network (Diff-CoGAN) for Semi-Supervised Medical Image Segmentation. **2023**, 14, 190 ○
- 155 A Convolutional Neural Network for Coastal Aquaculture Extraction from High-Resolution Remote Sensing Imagery. **2023**, 15, 5332 ○
- 154 Research on Image Semantic Segmentation Method Based on Combination of DeepLabV3+ and Structure Reparameterization. **2022**, ○
- 153 Defending against adversarial examples using perceptual image hashing. **2023**, 32, ○
- 152 6D Object Localization in Car-Assembly Industrial Environment. **2023**, 9, 72 ○
- 151 CRSNet: Cloud and Cloud Shadow Refinement Segmentation Networks for Remote Sensing Imagery. **2023**, 15, 1664 ○
- 150 Coverage Estimation of Wireless Network Using Attention U-Net. **2022**, ○
- 149 Automated tongue segmentation using deep encoder-decoder model. ○
- 148 An advanced deep learning models-based plant disease detection: A review of recent research. 14, 1
- 147 AIR-PV: a benchmark dataset for photovoltaic panel extraction in optical remote sensing imagery. **2023**, 66, ○
- 146 JAAL-Net: a joint attention and adversarial learning network for skin lesion segmentation. **2023**, 68, 085021 ○
- 145 Intelligent Recognition of Concrete Surface Cracks Based on Deep Learning and Image Processing Technology. **2023**, 12, 1130-1140 ○
- 144 Convolutional Neural Network-Driven Improvements in Global Cloud Detection for Landsat 8 and Transfer Learning on Sentinel-2 Imagery. **2023**, 15, 1706 ○
- 143 N-Net: an UNet architecture with dual encoder for medical image segmentation. ○
- 142 Multi-task panoramic driving perception algorithm based on improved YOLOv5. 34, 314-325 ○
- 141 Using deep learning for pruning region detection and plant organ segmentation in dormant spur-pruned grapevines. ○
- 140 GSN-HVNET: A Lightweight, Multi-Task Deep Learning Framework for Nuclei Segmentation and Classification. **2023**, 10, 393 ○
- 139 Development of Semantic Segmentation Based on Deep Learning. 34, 281-288 ○

- 138 FSAU-Net: a network for extracting buildings from remote sensing imagery using feature self-attention. **2023**, 44, 1643-1664 ○
- 137 A Review on Early Diagnosis of Skin Cancer Detection Using Deep Learning Techniques. **2022**, ○
- 136 Breast Tumor Classification using Short-ResNet with Pixel-based Tumor Probability Map in Ultrasound Images. **2023**, 45, 74-84 ○
- 135 Prediction of the morphological evolution of a splashing drop using an encoder-decoder. **2023**, 4, 025002 ○
- 134 Optimization strategies of fruit detection to overcome the challenge of unstructured background in field orchard environment: a review. ○
- 133 RAD-UNet: Research on an improved lung nodule semantic segmentation algorithm based on deep learning. 13, ○
- 132 Equirectangular Image Data Detection, Segmentation and Classification of Varying Sized Traffic Signs: A Comparison of Deep Learning Methods. **2023**, 23, 3381 ○
- 131 NV2P-RCNN: Feature Aggregation Based on Voxel Neighborhood for 3D Object Detection. ○
- 130 ISTD-PDS7: A Benchmark Dataset for Multi-Type Pavement Distress Segmentation from CCD Images in Complex Scenarios. **2023**, 15, 1750 ○
- 129 DoubleU-NetPlus: a novel attention and context-guided dual U-Net with multi-scale residual feature fusion network for semantic segmentation of medical images. ○
- 128 Facial Landmark, Head Pose, and Occlusion Analysis Using Multitask Stacked Hourglass. **2023**, 11, 30970-30981 ○
- 127 A Hybrid Deep Learning Network for Skin Lesion Extraction. **2023**, 682-689 ○
- 126 Semantic Segmentation of Fire and Smoke Images Based on Dual Attention Mechanism. **2022**, ○
- 125 RESEARCH ON A METHOD TO RECOGNIZE NUMBERS ON LICENSE PLATES TOWARD SOPHISTICATION OF TRAFFIC VOLUME INVESTIGATION. **2023**, 79, n/a ○
- 124 A Review of Target Recognition Technology for Fruit Picking Robots: From Digital Image Processing to Deep Learning. **2023**, 13, 4160 1
- 123 Fake region identification in an image using deep learning segmentation model. ○
- 122 Review on Image Segmentation Methods Using Deep Learning. **2022**, ○
- 121 U-Net Architecture for Prostate Segmentation: The Impact of Loss Function on System Performance. **2023**, 10, 412 ○

- 120 Multi-State Online Estimation of Lithium-Ion Batteries Based on Multi-Task Learning. **2023**, 16, 3002 ○
- 119 HY1C/D-CZI Noctiluca scintillans Bloom Recognition Network Based on Hybrid Convolution and Self-Attention. **2023**, 15, 1757 ○
- 118 MSRFNet for skin lesion segmentation and deep learning with hybrid optimization for skin cancer detection. 1-20 ○
- 117 Image Segmentation Role in Self Driving Car. **2022**, ○
- 116 Automatic Liver Segmentation and 3D Imaging for CT Images Based on FANU-Net. **2023**, 544-554 ○
- 115 EDCNet: A Lightweight Object Detection Method Based on Encoding Feature Sharing for Drug Driving Detection. **2022**, ○
- 114 PSAGNet: A Water Body Extraction Method for High Resolution Remote Sensing Images. **2023**, 257-269 ○
- 113 Real-time and accurate defect segmentation of aluminum strip surface via a lightweight network. **2023**, 20, ○
- 112 A Method for Reconstructing Background from RGB-D SLAM in Indoor Dynamic Environments. **2023**, 23, 3529 ○
- 111 Research on Algorithm for Improving Infrared Image Defect Segmentation of Power Equipment. **2023**, 12, 1588 ○
- 110 MAMC-Net: an effective deep learning framework for whole-slide image tumor segmentation. ○
- 109 Semantic segmentation of vehicle vision based on two-branch Enet network. **2023**, ○
- 108 GCCSwin-UNet: Global Context and Cross-Shaped Windows Vision Transformer Network for Polyp Segmentation. **2023**, 11, 1035 ○
- 107 A texture-aware one-stage fabric defect detection network with adaptive feature fusion and multi-task training. ○
- 106 Research on Multi-task Semantic Segmentation Based on Attention and Feature Fusion Method. **2023**, 362-373 ○
- 105 BCTNet: Bi-Branch Cross-Fusion Transformer for Building Footprint Extraction. **2023**, 61, 1-14 ○
- 104 VLMS-Net: A Fusion Architecture for CT Image Segmentation. **2023**, 13, 4384 ○
- 103 Vector Road Map Updating from High-Resolution Remote-Sensing Images with the Guidance of Road Intersection Change Detection and Directed Road Tracing. **2023**, 15, 1840 ○

- 102 Deep Learning Approaches for Wildland Fires Remote Sensing: Classification, Detection, and Segmentation. **2023**, 15, 1821 ○
- 101 A real-time semantic visual SLAM for dynamic environment based on deep learning and dynamic probabilistic propagation. ○
- 100 A Multi-Objective Semantic Segmentation Algorithm Based on Improved U-Net Networks. **2023**, 15, 1838 ○
- 99 MFVNet: a deep adaptive fusion network with multiple field-of-views for remote sensing image semantic segmentation. **2023**, 66, ○
- 98 Feature-aware aggregation network for remote sensing image cloud detection. **2023**, 44, 1872-1899 ○
- 97 Autonomous Driving Through Road Segmentation Based on Computer Vision Techniques. **2023**, 117-128 ○
- 96 A novel residual block: replace Conv1D with Conv3D and stack more convolutions. 9, e1302 ○
- 95 Physics-Informed Deep Learning for Reconstruction of Spatial Missing Climate Information in the Antarctic. **2023**, 14, 658 ○
- 94 Mean Inflection Point Distance: Artificial Intelligence Mapping Accuracy Evaluation Index An Experimental Case Study of Building Extraction. **2023**, 15, 1848 ○
- 93 DeepLabV3+ Model. **2023**, 60, 0628003 ○
- 92 DSNet. **2023**, 60, 0628002 ○
- 91 Blood cells image segmentation and counting using deep transfer learning. **2023**, ○
- 90 U-Net. **2023**, 60, 0401002 ○
- 89 Semantic Segmentation of Remote Sensing Image Based on Improved DeepLabV3+ Model. **2023**, 13, 587-600 ○
- 88 FastCrack. **2023**, 60, 0615006 ○
- 87 PLDS-SLAM: Point and Line Features SLAM in Dynamic Environment. **2023**, 15, 1893 ○
- 86 Improved Three-Dimensional Reconstruction of Patient-Specific Carotid Bifurcation Using Deep Learning Based Segmentation of Ultrasound Images. **2023**, 223-248 ○
- 85 Dynamic visual simultaneous localization and mapping based on semantic segmentation module. ○

- 84 ?????DeepLab v3+?????????????. **2023**, 50, 0802105 ○
- 83 Multi-view knowledge distillation for efficient semantic segmentation. **2023**, 20, ○
- 82 ReSE-Net: Enhanced UNet architecture for lung segmentation in chest radiography images. ○
- 81 The nnU-Net based method for automatic segmenting fetal brain tissues. **2023**, 11, ○
- 80 ??GANs?????????????. **2023**, 52, 0112003 ○
- 79 ??????????????????AF-ICNet?????????????. **2023**, 52, 0110001 ○
- 78 Multi-level feature re-weighted fusion for the semantic segmentation of crops and weeds. **2023**, 101545 ○
- 77 Automatic Head-and-Neck Tumor Segmentation in MRI via an End-to-End Adversarial Network. ○
- 76 Landslide detection by deep learning based semantic segmentation using Sentinel-1 intensity images. ○
- 75 On the use of XAI for CNN Model Interpretation: A Remote Sensing Case Study. **2022**, ○
- 74 Improvement of automatic building region extraction based on deep neural network segmentation. 1-16 ○
- 73 A Multiscale Nonlocal Feature Extraction Network for Breast Lesion Segmentation in Ultrasound Images. **2023**, 72, 1-12 ○
- 72 An Efficient Approach for Semantic Segmentation of Salt Domes in Seismic Images Using Improved UNET Architecture. ○
- 71 Gear Pitting Measurement by Multi-Scale Splicing Attention U-Net. **2023**, 36, ○
- 70 Superpixel Consistency Saliency Map Generation for Weakly Supervised Semantic Segmentation of Remote Sensing Images. **2023**, 61, 1-16 ○
- 69 A study of high-resolution remote sensing image landslide detection with optimized anchor boxes and edge enhancement. ○
- 68 A novel dataset and efficient deep learning framework for automated grading of renal cell carcinoma from kidney histopathology images. **2023**, 13, ○
- 67 Early Detection of ColoRectal Cancer Using Patch-Based Hybrid Model and Transfer Learning. **2023**, 87-97 ○

- 66 A sketch semantic segmentation method using novel local feature aggregation and segment-level self-attention. ○
- 65 Combining Deep Learning and Multi-Source GIS Methods to Analyze Urban and Greening Changes. **2023**, 23, 3805 ○
- 64 TranSegNet: Hybrid CNN-Vision Transformers Encoder for Retina Segmentation of Optical Coherence Tomography. **2023**, 13, 976 ○
- 63 Novel Convolutions for Semantic Segmentation of Remote Sensing Images. **2023**, 61, 1-13 ○
- 62 Monitoring Impervious Surface Area Dynamics in Urban Areas Using Sentinel-2 Data and Improved Deeplabv3+ Model: A Case Study of Jinan City, China. **2023**, 15, 1976 ○
- 61 LiteST-Net: A Hybrid Model of Lite Swin Transformer and Convolution for Building Extraction from Remote Sensing Image. **2023**, 15, 1996 ○
- 60 Lightweight Detection System with Global Attention Network (GloAN) for Rice Lodging. **2023**, 12, 1595 ○
- 59 Automatic Railroad Track Components Inspection Using Hybrid Deep Learning Framework. **2023**, 72, 1-15 ○
- 58 Semantic Images Segmentation for Autonomous Driving Using Self-Attention Knowledge Distillation. **2022**, ○
- 57 Hierarchical DNN with Heterogeneous Computing Enabled High-Performance DNA Sequencing. **2022**, ○
- 56 Nuclei probability and centroid map network for nuclei instance segmentation in histology images. ○
- 55 Thermal error prediction and control method combining residual-based one-dimensional convolution-minimum gate unit model with physical-data-edge-cloud terminal architecture. ○
- 54 Loading Condition Monitoring of Asphalt Mixture in the Mixing Station Based on Semantic Segmentation. **2022**, ○
- 53 Semantic closed-loop based visual mapping algorithm for automated valet parking. 095440702311676 ○
- 52 A machine learning surrogate modeling benchmark for temperature field reconstruction of heat source systems. **2023**, 66, ○
- 51 Identification of Black Reef Shipwreck Sites Using AI and Satellite Multispectral Imagery. **2023**, 15, 2030 ○
- 50 A Novel Optimized Context-Based Deep Architecture for Scene Parsing. **2023**, 351-364 ○
- 49 Bmsmlet: boosting multi-scale information on multi-level aggregated features for salient object detection. ○

- 48 A Cross-Modal Feature Fusion Model Based on ConvNeXt for RGB-D Semantic Segmentation. **2023**, 11, 1828 ○
- 47 A Near-Real-Time Flood Detection Method Based on Deep Learning and SAR Images. **2023**, 15, 2046 ○
- 46 A Hybrid Image Segmentation Method for Accurate Measurement of Urban Environments. **2023**, 12, 1845 ○
- 45 Crack-Att Net: crack detection based on improved U-Net with parallel attention. ○
- 44 TT-Net: Tensorized Transformer Network for 3D medical image segmentation. **2023**, 107, 102234 ○
- 43 Multi-dimensional cascades neural network models for the segmentation of retinal vessels in colour fundus images. ○
- 42 Medical Image Segmentation Used Unsupervised Convolutional Neural Network. **2022**, ○
- 41 SVD-SLAM: Stereo Visual SLAM Algorithm Based on Dynamic Feature Filtering for Autonomous Driving. **2023**, 12, 1883 ○
- 40 ACR2UNet: Semantic Segmentation of Remotely Sensed Images using Residual-Recurrent UNet and Asymmetric Convolutions. **2023**, ○
- 39 SFAF-MA: Spatial Feature Aggregation and Fusion with Modality Adaptation for RGB-Thermal Semantic Segmentation. **2023**, 1-1 ○
- 38 EBUNet: a fast and accurate semantic segmentation network with lightweight efficient bottleneck unit. ○
- 37 State-Level Mapping of the Road Transport Network from Aerial Orthophotography: An End-to-End Road Extraction Solution Based on Deep Learning Models Trained for Recognition, Semantic Segmentation and Post-Processing with Conditional Generative Learning. **2023**, 15, 2099 ○
- 36 An Enhanced Segmentation and Deep Learning Architecture for Early Diabetic Retinopathy Detection. **2023**, ○
- 35 A lightweight dual-path cascaded network for vessel segmentation in fundus image. **2023**, 20, 10790-10814 ○
- 34 Semantic Segmentation Based Leaf Disease Severity Estimation Using Deep Learning Algorithms. **2023**, ○
- 33 Dual-branch network for change detection of remote sensing image. **2023**, 123, 106324 ○
- 32 On the Robustness and Generalization Ability of Building Footprint Extraction on the Example of SegNet and Mask R-CNN. **2023**, 15, 2135 ○
- 31 Anti-Aliasing Attention U-net Model for Skin Lesion Segmentation. **2023**, 13, 1460 ○

- 30 PCBSegClassNet - A light-weight network for segmentation and classification of PCB component. **2023**, 120029 ○
- 29 Does greenness bring more green travelling? Evidence from free-floating bike-sharing in Beijing. **2023**, 109, 103586 ○
- 28 Implementing Model Predictive Control and Steady-State Dynamics for Lane Detection for Automated Vehicles in a Variety of Occlusion in Clothoid-Form Roads. **2023**, 23, 4085 ○
- 27 Fovea-UNet: Detection and Segmentation of Lymph Node Metastases in Colorectal Cancers with Deep Learning. ○
- 26 BCU-Net: Bridging ConvNeXt and U-Net for medical image segmentation. **2023**, 106960 ○
- 25 Deep Learning-based Moving Object Segmentation: Recent Progress and Research Prospects. ○
- 24 Efficient shallow learning as an alternative to deep learning. **2023**, 13, ○
- 23 An Improved SAR Image Semantic Segmentation Deeplabv3+ Network Based on the Feature Post-Processing Module. **2023**, 15, 2153 ○
- 22 A Fully Convolutional Network with Waterfall Atrous Spatial Pooling and Localized Active Contour Loss for Fish Segmentation. **2023**, 10, e4 ○
- 21 Lumbar spine segmentation method based on deep learning. ○
- 20 Research on computer vision technology based on BP-LSTM hybrid network. **2023**, ○
- 19 CTCD-Net: A Cross-Layer Transmission Network for Tiny Road Crack Detection. **2023**, 15, 2185 ○
- 18 A Preliminary Study of Deep Learning Sensor Fusion for Pedestrian Detection. **2023**, 23, 4167 ○
- 17 A survey of real-time surface defect inspection methods based on deep learning. ○
- 16 HEAT: Incorporating hierarchical enhanced attention transformation into urban road detection. ○
- 15 PVNet: A novel semantic segmentation model for extracting high-quality photovoltaic panels in large-scale systems from high-resolution remote sensing imagery. **2023**, 119, 103309 ○
- 14 Compact interactive dual-branch network for real-time semantic segmentation. ○
- 13 ViT-SAPS: Detail-Aware Transformer for Mechanical Assembly Semantic Segmentation. **2023**, 11, 41467-41479 ○

- 12 Resnet-Unet-FSOA based cranial nerve segmentation and medial axis extraction using MRI images. 1-17 ○
- 11 Self-attention-Based Efficient U-Net for Crack Segmentation. **2023**, 103-114 ○
- 10 Using 3D deep features from CT scans for cancer prognosis based on a video classification model: A multi-dataset feasibility study. ○
- 9 Deep learning techniques in liver tumour diagnosis using CT and MR imaging - A systematic review. **2023**, 141, 102557 ○
- 8 A color attention mechanism based on YES color space for skin segmentation. **2023**, 20, ○
- 7 Semantic Segmentation on Land Cover Spatial Data Using Various Deep Learning Approaches. **2023**, 543-555 ○
- 6 Exploring fast-infering in transformer backboned model for fatigue crack detection and propagation tracking for proton exchange membrane. **2023**, 573, 233129 ○
- 5 Automated Sulcus Depth Measurement on Axial Knee MR Images. **2023**, 448-461 ○
- 4 MIS-Net: A Deep Residual Network Based on Memorised Pooling Indices for Medical Image Segmentation. **2023**, 13-28 ○
- 3 TC-Net: A joint learning framework based on CNN and vision transformer for multi-lesion medical images segmentation. **2023**, 161, 106967 ○
- 2 Delineation Evaluation and Variation of Debris-Covered Glaciers Based on the Multi-Source Remote Sensing Images, Take Glaciers in the Eastern Tomur Peak Region for Example. **2023**, 15, 2575 ○
- 1 Multilevel Feature Aggregated Network with Instance Contrastive Learning Constraint for Building Extraction. **2023**, 15, 2585 ○