

# Gustavo Carneiro

## List of Publications by Year in descending order

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156  
papers

6,161  
citations

186265

28  
h-index

106344

65  
g-index

161  
all docs

161  
docs citations

161  
times ranked

5924  
citing authors

#	ARTICLE	IF	CITATIONS
1	Supervised Learning of Semantic Classes for Image Annotation and Retrieval. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 394-410.	13.9	731
2	Unsupervised CNN for Single View Depth Estimation: Geometry to the Rescue. Lecture Notes in Computer Science, 2016, , 740-756.	1.3	630
3	Combining deep learning and level set for the automated segmentation of the left ventricle of the heart from cardiac cine magnetic resonance. Medical Image Analysis, 2017, 35, 159-171.	11.6	263
4	A deep learning approach for the analysis of masses in mammograms with minimal user intervention. Medical Image Analysis, 2017, 37, 114-128.	11.6	248
5	Smart Mining for Deep Metric Learning. , 2017, , .		186
6	Multi-modal Cycle-Consistent Generalized Zero-Shot Learning. Lecture Notes in Computer Science, 2018, , 21-37.	1.3	183
7	An Improved Joint Optimization of Multiple Level Set Functions for the Segmentation of Overlapping Cervical Cells. IEEE Transactions on Image Processing, 2015, 24, 1261-1272.	9.8	169
8	The Segmentation of the Left Ventricle of the Heart From Ultrasound Data Using Deep Learning Architectures and Derivative-Based Search Methods. IEEE Transactions on Image Processing, 2012, 21, 968-982.	9.8	164
9	Detection and Measurement of Fetal Anatomies from Ultrasound Images using a Constrained Probabilistic Boosting Tree. IEEE Transactions on Medical Imaging, 2008, 27, 1342-1355.	8.9	163
10	Hidden stratification causes clinically meaningful failures in machine learning for medical imaging. , 2020, 2020, 151-159.		152
11	Automated Analysis of Unregistered Multi-View Mammograms With Deep Learning. IEEE Transactions on Medical Imaging, 2017, 36, 2355-2365.	8.9	139
12	Self-Supervised Monocular Trained Depth Estimation Using Self-Attention and Discrete Disparity Volume. , 2020, , .		139
13	Automated Mass Detection in Mammograms Using Cascaded Deep Learning and Random Forests. , 2015, , .		128
14	Precision Radiology: Predicting longevity using feature engineering and deep learning methods in a radiomics framework. Scientific Reports, 2017, 7, 1648.	3.3	123
15	Unregistered Multiview Mammogram Analysis with Pre-trained Deep Learning Models. Lecture Notes in Computer Science, 2015, , 652-660.	1.3	121
16	Weakly-supervised Video Anomaly Detection with Robust Temporal Feature Magnitude Learning. , 2021, , .		121
17	Robust Optimization for Deep Regression. , 2015, , .		112
18	Combining Multiple Dynamic Models and Deep Learning Architectures for Tracking the Left Ventricle Endocardium in Ultrasound Data. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 2592-2607.	13.9	104

#	ARTICLE	IF	CITATIONS
19	Evaluation of Three Algorithms for the Segmentation of Overlapping Cervical Cells. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 441-450.	6.3	94
20	FlowMonitor - a network monitoring framework for the Network Simulator 3 (NS-3). , 2009, , .		87
21	Deep Learning and Structured Prediction for the Segmentation of Mass in Mammograms. Lecture Notes in Computer Science, 2015, , 605-612.	1.3	77
22	The Automated Learning of Deep Features for Breast Mass Classification from Mammograms. Lecture Notes in Computer Science, 2016, , 106-114.	1.3	72
23	Probabilistic Object Detection: Definition and Evaluation. , 2020, , .		60
24	Artificial intelligence for pre-operative lymph node staging in colorectal cancer: a systematic review and meta-analysis. BMC Cancer, 2021, 21, 1058.	2.6	57
25	A Discriminative Model-Constrained Graph Cuts Approach to Fully Automated Pediatric Brain Tumor Segmentation in 3-D MRI. Lecture Notes in Computer Science, 2008, 11, 67-75.	1.3	56
26	Siam-U-Net: encoder-decoder siamese network for knee cartilage tracking in ultrasound images. Medical Image Analysis, 2020, 60, 101631.	11.6	55
27	Deep Reinforcement Learning for Active Breast Lesion Detection from DCE-MRI. Lecture Notes in Computer Science, 2017, , 665-673.	1.3	55
28	Automated Nucleus and Cytoplasm Segmentation of Overlapping Cervical Cells. Lecture Notes in Computer Science, 2013, 16, 452-460.	1.3	52
29	Phase-Based Local Features. Lecture Notes in Computer Science, 2002, , 282-296.	1.3	51
30	Artistic Image Classification: An Analysis on the PRINTART Database. Lecture Notes in Computer Science, 2012, , 143-157.	1.3	50
31	Flexible Spatial Configuration of Local Image Features. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 2089-2104.	13.9	47
32	Fully automated classification of mammograms using deep residual neural networks. , 2017, , .		46
33	A database centric view of semantic image annotation and retrieval. , 2005, , .		42
34	Learning Local Image Descriptors with Deep Siamese and Triplet Convolutional Networks by Minimizing Global Loss Functions. , 2016, , .		42
35	Deep learning uncertainty and confidence calibration for the five-class polyp classification from colonoscopy. Medical Image Analysis, 2020, 62, 101653.	11.6	42
36	Sensing in the presence of strong noise by deep learning of dynamic multimode fiber interference. Photonics Research, 2021, 9, B109.	7.0	42

#	ARTICLE	IF	CITATIONS
37	Left ventricle segmentation from cardiac MRI combining level set methods with deep belief networks. , 2013, , .		40
38	Deep structured learning for mass segmentation from mammograms. , 2015, , .		39
39	Computer-aided diagnosis for characterization of colorectal lesions: comprehensive software that includes differentiation of serrated lesions. <i>Gastrointestinal Endoscopy</i> , 2020, 92, 891-899.	1.0	37
40	A Theoretically Sound Upper Bound on the Triplet Loss for Improving the Efficiency of Deep Distance Metric Learning. , 2019, , .		36
41	In Defence of RANSAC for Outlier Rejection in Deformable Registration. <i>Lecture Notes in Computer Science</i> , 2012, , 274-287.	1.3	35
42	Validation and algorithmic audit of a deep learning system for the detection of proximal femoral fractures in patients in the emergency department: a diagnostic accuracy study. <i>The Lancet Digital Health</i> , 2022, 4, e351-e358.	12.3	31
43	Sparse Flexible Models of Local Features. <i>Lecture Notes in Computer Science</i> , 2006, , 29-43.	1.3	30
44	Improving the performance of pedestrian detectors using convolutional learning. <i>Pattern Recognition</i> , 2017, 61, 641-649.	8.1	28
45	Review of Deep Learning Methods in Mammography, Cardiovascular, and Microscopy Image Analysis. <i>Advances in Computer Vision and Pattern Recognition</i> , 2017, , 11-32.	1.3	28
46	Training Medical Image Analysis Systems like Radiologists. <i>Lecture Notes in Computer Science</i> , 2018, , 546-554.	1.3	27
47	Deep Learning-Based Femoral Cartilage Automatic Segmentation in Ultrasound Imaging for Guidance in Robotic Knee Arthroscopy. <i>Ultrasound in Medicine and Biology</i> , 2020, 46, 422-435.	1.5	27
48	On the importance of normalisation layers in deep learning with piecewise linear activation units. , 2016, , .		26
49	Scaling CNNs for High Resolution Volumetric Reconstruction from a Single Image. , 2017, , .		26
50	Constrained Contrastive Distribution Learning for Unsupervised Anomaly Detection and Localisation in Medical Images. <i>Lecture Notes in Computer Science</i> , 2021, , 128-140.	1.3	26
51	Robust left ventricle segmentation from ultrasound data using deep neural networks and efficient search methods. , 2010, , .		25
52	Semantic-based indexing of fetal anatomies from 3-D ultrasound data using global/semi-local context and sequential sampling. , 2008, , .		24
53	Multiple dynamic models for tracking the left ventricle of the heart from ultrasound data using particle filters and deep learning architectures. , 2010, , .		24
54	A deep convolutional neural network module that promotes competition of multiple-size filters. <i>Pattern Recognition</i> , 2017, 71, 94-105.	8.1	24

#	ARTICLE	IF	CITATIONS
55	Producing Radiologist-Quality Reports for Interpretable Deep Learning. , 2019, , .		24
56	A Survey on Deep Learning with Noisy Labels: How to train your model when you cannot trust on the annotations?. , 2020, , .		24
57	Artificial intelligence for the diagnosis of lymph node metastases in patients with abdominopelvic malignancy: A systematic review and meta-analysis. Artificial Intelligence in Medicine, 2021, 113, 102022.	6.5	23
58	Lung segmentation in chest radiographs using distance regularized level set and deep-structured learning and inference. , 2015, , .		22
59	Fast prototyping of network protocols through ns-3 simulation model reuse. Simulation Modelling Practice and Theory, 2011, 19, 2063-2075.	3.8	21
60	Tree RE-weighted belief propagation using deep learning potentials for mass segmentation from mammograms. , 2015, , .		21
61	Globally optimal breast mass segmentation from DCE-MRI using deep semantic segmentation as shape prior. , 2017, , .		20
62	Automatic Segmentation of Multiple Structures in Knee Arthroscopy Using Deep Learning. IEEE Access, 2020, 8, 51853-51861.	4.2	19
63	Self-supervised Mean Teacher for Semi-supervised Chest X-Ray Classification. Lecture Notes in Computer Science, 2021, , 426-436.	1.3	19
64	Fetal biometry: a comparison between experienced sonographers and automated measurements. Journal of Maternal-Fetal and Neonatal Medicine, 2009, 22, 43-50.	1.5	18
65	Deep Learning Models for Classifying Mammogram Exams Containing Unregistered Multi-View Images and Segmentation Maps of Lesions <sup>11</sup> This work is an extension of the paper published by the same authors at the Medical Image Computing and Computer-Assisted Intervention (MICCAI 2015) [1].. , 2017, , 321-339.		18
66	Pre and post-hoc diagnosis and interpretation of malignancy from breast DCE-MRI. Medical Image Analysis, 2019, 58, 101562.	11.6	18
67	LOW: Training deep neural networks by learning optimal sample weights. Pattern Recognition, 2021, 110, 107585.	8.1	18
68	Automated 5-year mortality prediction using deep learning and radiomics features from chest computed tomography. , 2017, , .		17
69	One-Stage Five-Class Polyp Detection and Classification. , 2019, , .		17
70	Fully Automated Non-rigid Segmentation with Distance Regularized Level Set Evolution Initialized and Constrained by Deep-Structured Inference. , 2014, , .		16
71	End-To-End Diagnosis And Segmentation Learning From Cardiac Magnetic Resonance Imaging. , 2019, , .		16
72	Uncertainty in Model-Agnostic Meta-Learning using Variational Inference. , 2020, , .		15

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73	Double Encoder-Decoder Networks for Gastrointestinal Polyp Segmentation. Lecture Notes in Computer Science, 2021, , 293-307.	1.3	15
74	Deep Learning on Sparse Manifolds for Faster Object Segmentation. IEEE Transactions on Image Processing, 2017, 26, 4978-4990.	9.8	14
75	Few-Shot Anomaly Detection for Polyp Frames from Colonoscopy. Lecture Notes in Computer Science, 2020, , 274-284.	1.3	14
76	Region Proposals for Saliency Map Refinement for Weakly-Supervised Disease Localisation and Classification. Lecture Notes in Computer Science, 2020, , 539-549.	1.3	13
77	Bayesian CNN for Segmentation Uncertainty Inference on 4D Ultrasound Images of the Femoral Cartilage for Guidance in Robotic Knee Arthroscopy. IEEE Access, 2020, 8, 223961-223975.	4.2	13
78	Bayesian Semantic Instance Segmentation in Open Set World. Lecture Notes in Computer Science, 2018, , 3-18.	1.3	13
79	Automatic Fetal Measurements in Ultrasound Using Constrained Probabilistic Boosting Tree. , 2007, 10, 571-579.		12
80	Automatic Quality Assessment of Transperineal Ultrasound Images of the Male Pelvic Region, Using Deep Learning. Ultrasound in Medicine and Biology, 2020, 46, 445-454.	1.5	11
81	Artificial intelligence in gastrointestinal endoscopy. Journal of Gastroenterology and Hepatology (Australia), 2021, 36, 5-6.	2.8	11
82	Fast and Robust 3-D MRI Brain Structure Segmentation. Lecture Notes in Computer Science, 2009, 12, 575-583.	1.3	11
83	Generalised Zero-Shot Learning with Domain Classification in a Joint Semantic and Visual Space. , 2019, , .		10
84	Approximate Fisher Information Matrix to Characterize the Training of Deep Neural Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 15-26.	13.9	10
85	Deep learning to diagnose pouch of Douglas obliteration with ultrasound sliding sign. Reproduction and Fertility, 2021, 2, 236-243.	1.8	10
86	The quantitative characterization of the distinctiveness and robustness of local image descriptors. Image and Vision Computing, 2009, 27, 1143-1156.	4.5	9
87	Incremental on-line semi-supervised learning for segmenting the left ventricle of the heart from ultrasound data. , 2011, , .		9
88	Model Agnostic Saliency For Weakly Supervised Lesion Detection From Breast DCE-MRI. , 2019, , .		9
89	One Shot Segmentation: Unifying Rigid Detection and Non-Rigid Segmentation Using Elastic Regularization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 3054-3070.	13.9	9
90	Photoshopping Colonoscopy Video Frames. , 2020, , .		9

#	ARTICLE	IF	CITATIONS
91	Integration of mobility and qos in 4g scenarios. , 2007, , .		8
92	Graph-based methods for the automatic annotation and retrieval of art prints. , 2011, , .		8
93	What Is the Role of Independence for Visual Recognition?. Lecture Notes in Computer Science, 2002, , 297-311.	1.3	8
94	Self-supervised Depth Estimation to Regularise Semantic Segmentation in Knee Arthroscopy. Lecture Notes in Computer Science, 2020, , 594-603.	1.3	8
95	Convolutional Nets Versus Vision Transformers for Diabetic Foot Ulcer Classification. Lecture Notes in Computer Science, 2022, , 21-29.	1.3	8
96	3D Semantic Mapping from Arthroscopy Using Out-of-Distribution Pose and Depth and In-Distribution Segmentation Training. Lecture Notes in Computer Science, 2021, , 383-393.	1.3	7
97	The use of on-line co-training to reduce the training set size in pattern recognition methods: Application to left ventricle segmentation in ultrasound. , 2012, , .		6
98	Semi-Supervised Multi-Domain Multi-Task Training for Metastatic Colon Lymph Node Diagnosis from Abdominal CT. , 2020, , .		6
99	Deep Learning for US Image Quality Assessment Based on Femoral Cartilage Boundary Detection in Autonomous Knee Arthroscopy. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 2543-2552.	3.0	6
100	Few-Shot Microscopy Image Cell Segmentation. Lecture Notes in Computer Science, 2021, , 139-154.	1.3	6
101	Combining Deep Learning and Structured Prediction for Segmenting Masses in Mammograms. Advances in Computer Vision and Pattern Recognition, 2017, , 225-240.	1.3	6
102	The automatic design of feature spaces for local image descriptors using an ensemble of non-linear feature extractors. , 2010, , .		5
103	Non-rigid Segmentation Using Sparse Low Dimensional Manifolds and Deep Belief Networks. , 2014, , .		5
104	Weakly-Supervised Structured Output Learning with Flexible and Latent Graphs Using High-Order Loss Functions. , 2015, , .		5
105	Multi-atlas segmentation using manifold learning with deep belief networks. , 2016, , .		5
106	Automatic Quantification of Tumour Hypoxia From Multi-Modal Microscopy Images Using Weakly-Supervised Learning Methods. IEEE Transactions on Medical Imaging, 2017, 36, 1405-1417.	8.9	5
107	Unsupervised Task Design to Meta-Train Medical Image Classifiers. , 2020, , .		5
108	WiMetroNet A Scalable Wireless Network for Metropolitan Transports. , 2010, , .		4

#	ARTICLE	IF	CITATIONS
109	Time and order estimation of paintings based on visual features and expert priors. , 2011, , .		4
110	Post-Hoc Overall Survival Time Prediction From Brain MRI. , 2021, , .		4
111	Fully Automated Segmentation Using Distance Regularised Level Set and Deep-Structured Learning and Inference. Advances in Computer Vision and Pattern Recognition, 2017, , 197-224.	1.3	4
112	QoS abstraction layer in 4G access networks. Telecommunication Systems, 2007, 35, 55-65.	2.5	3
113	Combining MBMS and IEEE 802.21 for on-the-road emergency. , 2008, , .		3
114	Artistic Image Analysis Using Graph-Based Learning Approaches. IEEE Transactions on Image Processing, 2013, 22, 3168-3178.	9.8	3
115	Top-Down Segmentation of Non-rigid Visual Objects Using Derivative-Based Search on Sparse Manifolds. , 2013, , .		3
116	The use of deep learning features in a hierarchical classifier learned with the minimization of a non-greedy loss function that delays gratification. , 2015, , .		3
117	Automatic detection of necrosis, normoxia and hypoxia in tumors from multimodal cytological images. , 2015, , .		3
118	Cardiovascular Diseases. , 2019, , 167-185.		3
119	Identifying protein subcellular localisation in scientific literature using bidirectional deep recurrent neural network. Scientific Reports, 2021, 11, 1696.	3.3	3
120	Self-Supervised Lesion Change Detection and Localisation in Longitudinal Multiple Sclerosis Brain Imaging. Lecture Notes in Computer Science, 2021, , 670-680.	1.3	3
121	Minimum Bayes error features for visual recognition. Image and Vision Computing, 2009, 27, 131-140.	4.5	2
122	The Fusion of Deep Learning Architectures and Particle Filtering Applied to Lip Tracking. , 2010, , .		2
123	Saliency Improvement in Feature-Poor Surgical Environments Using Local Laplacian of Specified Histograms. IEEE Access, 2020, 8, 213378-213388.	4.2	2
124	Visual Localisation for Knee Arthroscopy. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 2137-2145.	2.8	2
125	CRISTAL: Adapting Workplace Training to the Real World Context with an Intelligent Simulator for Radiology Trainees. Lecture Notes in Computer Science, 2016, , 430-435.	1.3	2
126	Efficient search methods and deep belief networks with particle filtering for non-rigid tracking: Application to lip tracking. , 2010, , .		1



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127	The automatic annotation and retrieval of digital images of prints and tile panels using network link analysis algorithms. Proceedings of SPIE, 2011, , .	0.8	1
128	Explaining scene composition using kinematic chains of humans: application to Portuguese tiles history. , 2011, , .		1
129	An nsâ€³ architecture for simulating joint radio resource management strategies in interconnected WLAN and UMTS networks. Transactions on Emerging Telecommunications Technologies, 2012, 23, 537-549.	3.9	1
130	Transparent and scalable terminal mobility for vehicular networks. Computer Networks, 2012, 56, 577-597.	5.1	1
131	Fuzzy clustering based encoding for Visual Object Classification. , 2013, , .		1
132	3-D Modeling from Concept Sketches of Human Characters with Minimal User Interaction. , 2015, , .		1
133	SAFety, Effectiveness of care and Resource use among Australian Hospitals (SAFER Hospitals): a protocol for a population-wide cohort study of outcomes of hospital care. BMJ Open, 2020, 10, e035446.	1.9	1
134	Why are Generative Adversarial Networks so Fascinating and Annoying?. , 2020, , .		1
135	Flexible and Latent Structured Output Learning. Lecture Notes in Computer Science, 2015, , 220-228.	1.3	1
136	Deep Reinforcement Learning for Detecting Breast Lesions from DCE-MRI. Advances in Computer Vision and Pattern Recognition, 2019, , 163-178.	1.3	1
137	In Defense of Kalman Filtering for Polyp Tracking from Colonoscopy Videos. , 2022, , .		1
138	A Comparative Study on the Use of an Ensemble of Feature Extractors for the Automatic Design of Local Image Descriptors. , 2010, , .		0
139	Reducing the training set using semi-supervised self-training algorithm for segmenting the left ventricle in ultrasound images. , 2011, , .		0
140	Semi-supervised self-training model for the segmentation of the left ventricle of the heart from ultrasound data. , 2011, , .		0
141	On-line re-training and segmentation with reduction of the training set: Application to the left ventricle detection in ultrasound imaging. , 2012, , .		0
142	Point Correspondence Validation under Unknown Radial Distortion. , 2013, , .		0
143	Combining a bottom up and top down classifiers for the segmentation of the left ventricle from cardiac imagery. , 2013, , .		0
144	Closed-Loop Deep Vision. , 2013, , .		0

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145	Management driven hybrid multicast framework for content aware networks. , 2014, 52, 158-165.		0
146	Towards reduction of the training and search running time complexities for non-rigid object segmentation. , 2015, , .		0
147	Region of Interest Autoencoders with an Application to Pedestrian Detection. , 2017, , .		0
148	1st MICCAI workshop on deep learning in medical image analysis. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2018, 6, 241-242.	1.9	0
149	Quality Assessment of Transperineal Ultrasound Images of the Male Pelvic Region Using Deep Learning. , 2018, , .		0
150	Single View 3D Point Cloud Reconstruction using Novel View Synthesis and Self-Supervised Depth Estimation. , 2019, , .		0
151	Special Issue on Deep Learning for Robotic Vision. International Journal of Computer Vision, 2020, 128, 1160-1161.	15.6	0
152	Augmentation Network for Generalised Zero-Shot Learning. Lecture Notes in Computer Science, 2021, , 442-458.	1.3	0
153	Arthroscope Localization in 3D Ultrasound Volumes Using Weakly Supervised Deep Learning. Applied Sciences (Switzerland), 2021, 11, 6828.	2.5	0
154	Generalised Zero-shot Learning with Multi-modal Embedding Spaces. , 2020, , .		0
155	PAC-Bayes Meta-Learning With Implicit Task-Specific Posteriors. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2023, 45, 841-851.	13.9	0
156	A Chaos Theory Approach to Understand Neural Network Optimization. , 2021, , .		0