Shuiwang Ji

List of Publications by Year
in descending order

117 papers	10,903 citations	147801 31 h-index	95266 68 g-index
118 all docs	118 docs citations	118 times ranked	10863 citing authors

#	Article	IF	Citations
1	3D Convolutional Neural Networks for Human Action Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 221-231.	13.9	4,472
2	Deep convolutional neural networks for multi-modality isointense infant brain image segmentation. NeuroImage, 2015, 108, 214-224.	4.2	662
3	Large-Scale Learnable Graph Convolutional Networks. , 2018, , .		336
4	An accelerated gradient method for trace norm minimization. , 2009, , .		317
5	A shared-subspace learning framework for multi-label classification. ACM Transactions on Knowledge Discovery From Data, 2010, 4, 1-29.	3.5	265
6	Deep Learning Based Imaging Data Completion for Improved Brain Disease Diagnosis. Lecture Notes in Computer Science, 2014, 17, 305-312.	1.3	249
7	Feature Selection Based on Structured Sparsity: A Comprehensive Study. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 1490-1507.	11.3	239
8	Discriminant sparse neighborhood preserving embedding for face recognition. Pattern Recognition, 2012, 45, 2884-2893.	8.1	229
9	A Robust Deep Model for Improved Classification of AD/MCI Patients. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 1610-1616.	6.3	223
10	Canonical Correlation Analysis for Multilabel Classification: A Least-Squares Formulation, Extensions, and Analysis. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 194-200.	13.9	214
11	Towards Deeper Graph Neural Networks. , 2020, , .		203
12	Hypergraph spectral learning for multi-label classification. , 2008, , .		180
13	Trace Norm Regularization: Reformulations, Algorithms, and Multi-Task Learning. SIAM Journal on Optimization, 2010, 20, 3465-3489.	2.0	157
14	Generalized Linear Discriminant Analysis: A Unified Framework and Efficient Model Selection. IEEE Transactions on Neural Networks, 2008, 19, 1768-1782.	4.2	156
15	Extracting shared subspace for multi-label classification. , 2008, , .		139
16	XGNN: Towards Model-Level Explanations of Graph Neural Networks. , 2020, , .		128
17	Deep Learning Segmentation of Optical Microscopy Images Improves 3-D Neuron Reconstruction. IEEE Transactions on Medical Imaging, 2017, 36, 1533-1541.	8.9	104
18	Deep Model Based Transfer and Multi-Task Learning for Biological Image Analysis. IEEE Transactions on Big Data, 2020, 6, 322-333.	6.1	101

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19	Residual Deconvolutional Networks for Brain Electron Microscopy Image Segmentation. IEEE Transactions on Medical Imaging, 2017, 36, 447-456.	8.9	98
20	Non-Local U-Nets for Biomedical Image Segmentation. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 6315-6322.	4.9	96
21	A Machine Learning Approach for the Identification of Protein Secondary Structure Elements from Electron Cryoâ€Microscopy Density Maps. Biopolymers, 2012, 97, 698-708.	2.4	87
22	Deep Model Based Transfer and Multi-Task Learning for Biological Image Analysis. , 2015, , .		82
23	Smoothed Dilated Convolutions for Improved Dense Prediction. , 2018, , .		81
24	DeepEM3D: approaching human-level performance on 3D anisotropic EM image segmentation. Bioinformatics, 2017, 33, 2555-2562.	4.1	70
25	Deep Adversarial Learning for Multi-Modality Missing Data Completion. , 2018, , .		65
26	FlyExpress: visual mining of spatiotemporal patterns for genes and publications in <i>Drosophila</i> embryogenesis. Bioinformatics, 2011, 27, 3319-3320.	4.1	64
27	Graph U-Nets. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	13.9	60
28	A least squares formulation for canonical correlation analysis. , 2008, , .		59
29	Line Graph Neural Networks for Link Prediction. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	13.9	59
30	Multiview Partitioning via Tensor Methods. IEEE Transactions on Knowledge and Data Engineering, 2013, 25, 1056-1069.	5.7	55
31	Drosophila Gene Expression Pattern Annotation through Multi-Instance Multi-Label Learning. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2012, 9, 98-112.	3.0	53
32	Deep convolutional neural networks for annotating gene expression patterns in the mouse brain. BMC Bioinformatics, 2015, 16, 147.	2.6	53
33	Deep convolutional neural networks for detecting secondary structures in protein density maps from cryo-electron microscopy. , 2016, 2016, 41-46.		47
34	Deep models for brain EM image segmentation: novel insights and improved performance. Bioinformatics, 2016, 32, 2352-2358.	4.1	43
35	XFake: Explainable Fake News Detector with Visualizations. , 2019, , .		42
36	Topology-Aware Graph Pooling Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 4512-4518.	13.9	42

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37	Integrative analysis of the connectivity and gene expression atlases in the mouse brain. NeuroImage, 2014, 84, 245-253.	4.2	41
38	A Deep Learning Approach for Targeted Contrast-Enhanced Ultrasound Based Prostate Cancer Detection. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2019, 16, 1794-1801.	3.0	40
39	Pixel Transposed Convolutional Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 42, 1-1.	13.9	40
40	A Multi-Scale Approach for Graph Link Prediction. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 3308-3315.	4.9	38
41	Non-Local Graph Neural Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 10270-10276.	13.9	38
42	A deep transfer learning approach for improved post-traumatic stress disorder diagnosis. Knowledge and Information Systems, 2019, 60, 1693-1724.	3.2	36
43	A bag-of-words approach for Drosophila gene expression pattern annotation. BMC Bioinformatics, 2009, 10, 119.	2.6	35
44	Advanced graph and sequence neural networks for molecular property prediction and drug discovery. Bioinformatics, 2022, 38, 2579-2586.	4.1	34
45	Automated annotation of <i>Drosophila</i> gene expression patterns using a controlled vocabulary. Bioinformatics, 2008, 24, 1881-1888.	4.1	33
46	Graph Representation Learning via Hard and Channel-Wise Attention Networks. , 2019, , .		33
47	Second-Order Pooling for Graph Neural Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2023, 45, 6870-6880.	13.9	33
48	Deep Convolutional Neural Networks for Multi-instance Multi-task Learning. , 2015, , .		32
49	How to Estimate the Regularization Parameter for Spectral Regression Discriminant Analysis and its Kernel Version?. IEEE Transactions on Circuits and Systems for Video Technology, 2014, 24, 211-223.	8.3	31
50	Multi-View Missing Data Completion. IEEE Transactions on Knowledge and Data Engineering, 2018, 30, 1296-1309.	5.7	31
51	Multi-Stage Variational Auto-Encoders for Coarse-to-Fine Image Generation. , 2019, , 630-638.		31
52	Mining discrete patterns via binary matrix factorization. , 2009, , .		30
53	On Attribution of Recurrent Neural Network Predictions via Additive Decomposition. , 2019, , .		30
54	Kronecker Attention Networks. , 2020, , .		30

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55	High-resolution prediction of mouse brain connectivity using gene expression patterns. Methods, 2015, 73, 71-78.	3.8	29
56	Smoothed dilated convolutions for improved dense prediction. Data Mining and Knowledge Discovery, 2021, 35, 1470-1496.	3.7	29
57	A least squares formulation for a class of generalized eigenvalue problems in machine learning. , 2009, , .		28
58	A Deep Transfer Learning Approach for Improved Post-Traumatic Stress Disorder Diagnosis. , 2017, , .		27
59	Global voxel transformer networks for augmented microscopy. Nature Machine Intelligence, 2021, 3, 161-171.	16.0	26
60	Allen mouse brain atlases reveal different neural connection and gene expression patterns in cerebellum gyri and sulci. Brain Structure and Function, 2015, 220, 2691-2703.	2.3	25
61	Drosophila gene expression pattern annotation using sparse features and term-term interactions. , 2009, 2009, 407-415.		24
62	Multi-Task Feature Interaction Learning. , 2016, , .		24
63	Robust Deep Learning for Improved Classification of AD/MCI Patients. Lecture Notes in Computer Science, 2014, , 240-247.	1.3	23
64	Global Pixel Transformers for Virtual Staining of Microscopy Images. IEEE Transactions on Medical Imaging, 2020, 39, 2256-2266.	8.9	23
65	Deep Learning of High-Order Interactions for Protein Interface Prediction. , 2020, , .		23
66	Computational genetic neuroanatomy of the developing mouse brain: dimensionality reduction, visualization, and clustering. BMC Bioinformatics, 2013, 14, 222.	2.6	22
67	Segmenting delaminations in carbon fiber reinforced polymer composite CT using convolutional neural networks. AIP Conference Proceedings, 2016, , .	0.4	21
68	Interpreting Deep Models for Text Analysis via Optimization and Regularization Methods. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 5717-5724.	4.9	21
69	Computational modeling of cellular structures using conditional deep generative networks. Bioinformatics, 2019, 35, 2141-2149.	4.1	20
70	Structural Graphical Lasso for Learning Mouse Brain Connectivity. , 2015, , .		20
71	Multi-Modality Disease Modeling via Collective Deep Matrix Factorization. , 2017, , .		18
72	Discriminant kernel and regularization parameter learning via semidefinite programming. , 2007, , .		17

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73	Learning the kernel matrix in discriminant analysis via quadratically constrained quadratic programming. , 2007, , .		16
74	Learning Sparse Representations for Fruit-Fly Gene Expression Pattern Image Annotation and Retrieval. BMC Bioinformatics, 2012, 13, 107.	2.6	16
75	AdaGNN. , 2021, , .		16
76	Computational network analysis of the anatomical and genetic organizations in the mouse brain. Bioinformatics, 2011, 27, 3293-3299.	4.1	15
77	Learning Graph Pooling and Hybrid Convolutional Operations for Text Representations. , 2019, , .		15
78	Kernel Uncorrelated and Regularized Discriminant Analysis: A Theoretical and Computational Study. IEEE Transactions on Knowledge and Data Engineering, 2008, 20, 1311-1321.	5.7	13
79	Global analysis of gene expression and projection target correlations in the mouse brain. Brain Informatics, 2015, 2, 107-117.	3.0	13
80	Voxel Deconvolutional Networks for 3D Brain Image Labeling. , 2018, 2018, 1226-1234.		13
81	Discriminant Analysis for Dimensionality Reduction: An Overview of Recent Developments. , 0, , 1-19.		12
82	Image-level and group-level models for Drosophilagene expression pattern annotation. BMC Bioinformatics, 2013, 14, 350.	2.6	12
83	Automated annotation of developmental stages of <i>Drosophila</i> embryos in images containing spatial patterns of expression. Bioinformatics, 2014, 30, 266-273.	4.1	12
84	Large-scale Exploration of Neuronal Morphologies Using Deep Learning and Augmented Reality. Neuroinformatics, 2018, 16, 339-349.	2.8	12
85	Adaptive diffusion kernel learning from biological networks for protein function prediction. BMC Bioinformatics, 2008, 9, 162.	2.6	11
86	Learning subspace kernels for classification. , 2008, , .		11
87	Evolutionary soft co-clustering: formulations, algorithms, and applications. Data Mining and Knowledge Discovery, 2015, 29, 765-791.	3.7	11
88	A sparsity-inducing formulation for evolutionary co-clustering. , 2012, , .		9
89	Neuronal Activities in the Mouse Visual Cortex Predict Patterns of Sensory Stimuli. Neuroinformatics, 2018, 16, 473-488.	2.8	9
90	Interpreting Image Classifiers by Generating Discrete Masks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, PP, 1-1.	13.9	9

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91	A mesh generation and machine learning framework for Drosophilagene expression pattern image analysis. BMC Bioinformatics, 2013, 14, 372.	2.6	8
92	Sparsity Learning Formulations for Mining Time-Varying Data. IEEE Transactions on Knowledge and Data Engineering, 2015, 27, 1411-1423.	5.7	8
93	Learning Convolutional Text Representations for Visual Question Answering. , 2018, , 594-602.		8
94	Learning Hierarchical and Shared Features for Improving 3D Neuron Reconstruction. , 2019, , .		8
95	CleftNet: Augmented Deep Learning for Synaptic Cleft Detection from Brain Electron Microscopy. IEEE Transactions on Medical Imaging, 2021, 40, 1-1.	8.9	8
96	Automated identification of cell-type-specific genes in the mouse brain by image computing of expression patterns. BMC Bioinformatics, 2014, 15, 209.	2.6	7
97	Collaborative Multi-View Denoising. , 2016, , .		6
98	Efficient and Invariant Convolutional Neural Networks for Dense Prediction. , 2017, , .		6
99	A Probabilistic Latent Semantic Analysis Model for Coclustering the Mouse Brain Atlas. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2013, 10, 1460-1468.	3.0	5
100	Development of Xantheneâ€Based Fluorescent Dyes: Machine Learningâ€Assisted Prediction vs. TDâ€DFT Prediction and Experimental Validation. Chemistry Methods, 2021, 1, 389-396.	3.8	5
101	Drosophila Gene Expression Pattern Annotation through Multi-Instance Multi-Label Learning. IJCAI: Proceedings of the Conference, 2009, 2009, 1445-1450.	0.5	5
102	A unified framework for generalized Linear Discriminant Analysis. , 2008, , .		4
103	Learning Local and Global Multi-context Representations for Document Classification. , 2019, , .		4
104	Evolutionary Soft Co-Clustering. , 2013, , .		4
105	Dense Transformer Networks for Brain Electron Microscopy Image Segmentation. , 2019, , .		4
106	Context-Aware Deep Representation Learning for Geo-Spatiotemporal Analysis. , 2020, , .		4
107	Recurrent Encoder-Decoder Networks for Time-Varying Dense Prediction. , 2017, , .		3
108	Deep Neural Networks with Knowledge Instillation. , 2020, , 370-378.		3

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109	Parallel Lasso Screening for Big Data Optimization. , 2016, , .		2
110	Three-dimensional protein shape similarity analysis based on hybrid features. Gene, 2018, 663, 138-147.	2.2	2
111	Spatial Variational Auto-Encoding via Matrix-Variate Normal Distributions. , 2019, , 648-656.		2
112	Deep Low-Shot Learning for Biological Image Classification and Visualization From Limited Training Samples. IEEE Transactions on Neural Networks and Learning Systems, 2021, PP, 1-11.	11.3	1
113	AUTOMATED GENE EXPRESSION PATTERN ANNOTATION IN THE MOUSE BRAIN. , 2014, , .		1
114	An Interpretable Neural Model with Interactive Stepwise Influence. Lecture Notes in Computer Science, 2019, , 528-540.	1.3	1
115	Towards Structured NLP Interpretation via Graph Explainers â€. Applied AI Letters, 2021, 2, e58.	2.2	1
116	IDM 2017. , 2017, , .		0
117	An Efficient Policy Gradient Method for Conditional Dialogue Generation. , 2019, , .		0