Davide Anguita

List of Publications by Year
in descending order

116 papers	3,460 citations	236925 25 h-index	155660 55 g-index
117 all docs	117 docs citations	117 times ranked	3267 citing authors

#	Article	IF	Citations
1	Human Activity Recognition on Smartphones Using a Multiclass Hardware-Friendly Support Vector Machine. Lecture Notes in Computer Science, 2012, , 216-223.	1.3	540
2	Transition-Aware Human Activity Recognition Using Smartphones. Neurocomputing, 2016, 171, 754-767.	5.9	502
3	Energy Load Forecasting Using Empirical Mode Decomposition and Support Vector Regression. IEEE Transactions on Smart Grid, 2013, 4, 549-556.	9.0	182
4	Big Data Analytics in the Cloud: Spark on Hadoop vs MPI/OpenMP on Beowulf. Procedia Computer Science, 2015, 53, 121-130.	2.0	147
5	Vessels fuel consumption forecast and trim optimisation: A data analytics perspective. Ocean Engineering, 2017, 130, 351-370.	4.3	127
6	Condition Based Maintenance in Railway Transportation Systems Based on Big Data Streaming Analysis. Procedia Computer Science, 2015, 53, 437-446.	2.0	98
7	In-Sample and Out-of-Sample Model Selection and Error Estimation for Support Vector Machines. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 1390-1406.	11.3	95
8	Statistical Learning Theory and ELM for Big Social Data Analysis. IEEE Computational Intelligence Magazine, 2016, 11, 45-55.	3.2	88
9	Train Delay Prediction Systems: A Big Data Analytics Perspective. Big Data Research, 2018, 11, 54-64.	4.2	85
10	Quantum optimization for training support vector machines. Neural Networks, 2003, 16, 763-770.	5.9	75
11	Dynamic Delay Predictions for Large-Scale Railway Networks: Deep and Shallow Extreme Learning Machines Tuned via Thresholdout. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2017, 47, 2754-2767.	9.3	72
12	Model selection for support vector machines: Advantages and disadvantages of the Machine Learning Theory. , 2010, , .		62
13	Feed-Forward Support Vector Machine Without Multipliers. IEEE Transactions on Neural Networks, 2006, 17, 1328-1331.	4.2	57
14	Condition-Based Maintenance of Naval Propulsion Systems with supervised Data Analysis. Ocean Engineering, 2018, 149, 268-278.	4.3	57
15	Machine learning approaches for improving condition-based maintenance of naval propulsion plants. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2016, 230, 136-153.	0.5	53
16	Hyperparameter design criteria for support vector classifiers. Neurocomputing, 2003, 55, 109-134.	5.9	50
17	Condition-based maintenance of naval propulsion systems: Data analysis with minimal feedback. Reliability Engineering and System Safety, 2018, 177, 12-23.	8.9	50
18	Optical wireless underwater communication for AUV: Preliminary simulation and experimental results. , 2011, , .		47

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19	Building an Underwater Wireless Sensor Network Based on Optical: Communication: Research Challenges and Current Results. , 2009, , .		46
20	Human Activity Recognition on Smartphones with Awareness of Basic Activities and Postural Transitions. Lecture Notes in Computer Science, 2014, , 177-184.	1.3	45
21	Tikhonov, Ivanov and Morozov regularization for support vector machine learning. Machine Learning, 2016, 103, 103-136.	5.4	44
22	Evaluating the Generalization Ability of Support Vector Machines through the Bootstrap. Neural Processing Letters, 2000, 11, 51-58.	3.2	43
23	A Hardware-friendly Support Vector Machine for Embedded Automotive Applications. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	38
24	A support vector machine with integer parameters. Neurocomputing, 2008, 72, 480-489.	5.9	38
25	A Learning Analytics Approach to Correlate the Academic Achievements of Students with Interaction Data from an Educational Simulator. Lecture Notes in Computer Science, 2015, , 352-366.	1.3	37
26	Fully Empirical and Data-Dependent Stability-Based Bounds. IEEE Transactions on Cybernetics, 2015, 45, 1913-1926.	9.5	29
27	A FPGA CORE GENERATOR FOR EMBEDDED CLASSIFICATION SYSTEMS. Journal of Circuits, Systems and Computers, 2011, 20, 263-282.	1.5	27
28	Data-Driven Photovoltaic Power Production Nowcasting and Forecasting for Polygeneration Microgrids. IEEE Systems Journal, 2018, 12, 2842-2853.	4.6	27
29	Local Rademacher Complexity: Sharper risk bounds with and without unlabeled samples. Neural Networks, 2015, 65, 115-125.	5.9	25
30	Advanced Analytics for Train Delay Prediction Systems by Including Exogenous Weather Data. , 2016, , .		25
31	Using Unsupervised Analysis to Constrain Generalization Bounds for Support Vector Classifiers. IEEE Transactions on Neural Networks, 2010, 21, 424-438.	4.2	20
32	In-sample model selection for Support Vector Machines. , 2011, , .		20
33	Selecting the hypothesis space for improving the generalization ability of Support Vector Machines. , 2011, , .		20
34	A Deep Connection Between the Vapnikâ€“Chervonenkis Entropy and the Rademacher Complexity. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 2202-2211.	11.3	20
35	Training Computationally Efficient Smartphoneâ€“Based Human Activity Recognition Models. Lecture Notes in Computer Science, 2013, , 426-433.	1.3	19
36	Maximal Discrepancy for Support Vector Machines. Neurocomputing, 2011, 74, 1436-1443.	5.9	17

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37	In-sample Model Selection for Trimmed Hinge Loss Support Vector Machine. Neural Processing Letters, 2012, 36, 275-283.	3.2	17
38	Global Rademacher Complexity Bounds: From Slow to Fast Convergence Rates. Neural Processing Letters, 2016, 43, 567-602.	3.2	17
39	Differential privacy and generalization: Sharper bounds with applications. Pattern Recognition Letters, 2017, 89, 31-38.	4.2	17
40	Spectral Analysis of Electricity Demand Using Hilbertâ€“Huang Transform. Sensors, 2020, 20, 2912.	3.8	17
41	PAC-bayesian analysis of distribution dependent priors: Tighter risk bounds and stability analysis. Pattern Recognition Letters, 2016, 80, 200-207.	4.2	16
42	Semi-supervised Learning for Affective Common-Sense Reasoning. Cognitive Computation, 2017, 9, 18-42.	5.2	16
43	Smart underwater wireless sensor networks. , 2012, , .		15
44	An improved analysis of the Rademacher data-dependent bound using its self bounding property. Neural Networks, 2013, 44, 107-111.	5.9	15
45	Mining Big Data with Random Forests. Cognitive Computation, 2019, 11, 294-316.	5.2	15
46	A dynamic, interpretable, and robust hybrid data analytics system for train movements in large-scale railway networks. International Journal of Data Science and Analytics, 2020, 9, 95-111.	4.1	15
47	Learning Resource-Aware Classifiers for Mobile Devices: From Regularization to Energy Efficiency. Neurocomputing, 2015, 169, 225-235.	5.9	14
48	A local Vapnikâ€“Chervonenkis complexity. Neural Networks, 2016, 82, 62-75.	5.9	13
49	Can machine learning explain human learning?. Neurocomputing, 2016, 192, 14-28.	5.9	13
50	Deep fair models for complex data: Graphs labeling and explainable face recognition. Neurocomputing, 2022, 470, 318-334.	5.9	13
51	Ship efficiency forecast based on sensors data collection: Improving numerical models through data analytics. , 2015, , .		12
52	Unintrusive Monitoring of Induction Motors Bearings via Deep Learning on Stator Currents. Procedia Computer Science, 2018, 144, 42-51.	2.0	12
53	Understanding Violin Playersâ€™ Skill Level Based on Motion Capture: a Data-Driven Perspective. Cognitive Computation, 2020, 12, 1356-1369.	5.2	12
54	Prospects and Problems of Optical Diffuse Wireless Communication for Underwater Wireless Sensor Networks. , 0, , .		11

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55	Unlabeled patterns to tighten Rademacher complexity error bounds for kernel classifiers. Pattern Recognition Letters, 2014, 37, 210-219.	4.2	11
56	Support vector machines and strictly positive definite kernel: The regularization hyperparameter is more important than the kernel hyperparameters. , 2015, , .		11
57	SLT-Based ELM for Big Social Data Analysis. Cognitive Computation, 2017, 9, 259-274.	5.2	11
58	Vessels Fuel Consumption: A Data Analytics Perspective to Sustainability. Studies in Fuzziness and Soft Computing, 2018, , 11-48.	0.8	11
59	Mixing floating- and fixed-point formats for neural network learning on neuroprocessors. Microprocessing and Microprogramming, 1996, 41, 757-769.	0.2	10
60	Optimizing Fuel Consumption in Thrust Allocation for Marine Dynamic Positioning Systems. IEEE Transactions on Automation Science and Engineering, 2022, 19, 122-142.	5.2	10
61	Neural structures for visual motion tracking. Machine Vision and Applications, 1995, 8, 275-288.	2.7	10
62	Neural network learning for analog VLSI implementations of support vector machines: a survey. Neurocomputing, 2003, 55, 265-283.	5.9	9
63	Machine learning for wear forecasting of naval assets for condition-based maintenance applications. , 2015, , .		9
64	Measuring the expressivity of graph kernels through Statistical Learning Theory. Neurocomputing, 2017, 268, 4-16.	5.9	9
65	Constraint-Aware Data Analysis on Mobile Devices. , 2017, , 127-149.		9
66	Toward Learning Trustworthily from Data Combining Privacy, Fairness, and Explainability: An Application to Face Recognition. Entropy, 2021, 23, 1047.	2.2	8
67	A Learning-Machine Based Method for the Simulation of Combustion Process in Automotive I.C. Engines. , 2003, , 595.		7
68	A learning machine for resource-limited adaptive hardware. , 2007, , .		7
69	Learning With Kernels: A Local Rademacher Complexity-Based Analysis With Application to Graph Kernels. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 4660-4671.	11.3	7
70	Associative structures for vision. Multidimensional Systems and Signal Processing, 1994, 5, 75-96.	2.6	6
71	Digital Least Squares Support Vector Machines. Neural Processing Letters, 2003, 18, 65-72.	3.2	6
72	Using Variable Neighborhood Search to improve the Support Vector Machine performance in embedded automotive applications. , 2008, , .		6

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73	Smart Plankton: a Nature Inspired Underwater Wireless Sensor Network. , 2008, , .		6
74	Test error bounds for classifiers: A survey of old and new results. , 2011, , .		6
75	A Survey of old and New Results for the Test Error Estimation of a Classifier. Journal of Artificial Intelligence and Soft Computing Research, 2013, 3, 229-242.	4.3	6
76	A support vector machine classifier from a bit-constrained, sparse and localized hypothesis space. , 2013, , .		5
77	Delay Prediction System for Large-Scale Railway Networks Based on Big Data Analytics. Advances in Intelligent Systems and Computing, 2017, , 139-150.	0.6	5
78	Randomized learning: Generalization performance of old and new theoretically grounded algorithms. Neurocomputing, 2018, 298, 21-33.	5.9	5
79	Automatic Hyperparameter Tuning for Support Vector Machines. Lecture Notes in Computer Science, 2002, , 1345-1350.	1.3	5
80	Neural structures for visual motion tracking. Machine Vision and Applications, 1995, 8, 275-288.	2.7	4
81	A heterogeneous and reconfigurable machine-vision system. Machine Vision and Applications, 1995, 8, 343-350.	2.7	4
82	Long-term energy load forecasting using Auto-Regressive and approximating Support Vector Regression. , 2012, , .		4
83	Vessel monitoring and design in industry 4.0: A data driven perspective. , 2016, , .		4
84	Marine Safety and Data Analytics: Vessel Crash Stop Maneuvering Performance Prediction. Lecture Notes in Computer Science, 2017, , 385-393.	1.3	4
85	Multilayer Graph Node Kernels: Stacking While Maintaining Convexity. Neural Processing Letters, 2018, 48, 649-667.	3.2	4
86	Crash Stop Maneuvering Performance Prediction: a Data-Driven Solution for Safety and Collision Avoidance. Data-Enabled Discovery and Applications, 2018, 2, 1.	1.2	4
87	Local Rademacher Complexity Machine. Neurocomputing, 2019, 342, 24-32.	5.9	4
88	A Learning Analytics Methodology to Profile Students Behavior and Explore Interactions with a Digital Electronics Simulator. Lecture Notes in Computer Science, 2014, , 596-597.	1.3	4
89	Keep it Simple: Handcrafting Feature and Tuning Random Forests and XGBoost to face the Affective Movement Recognition Challenge 2021. , 2021, , .		4
90	Nested Sequential Minimal Optimization for Support Vector Machines. Lecture Notes in Computer Science, 2012, , 156-163.	1.3	3

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91	Performance assessment and uncertainty quantification of predictive models for smart manufacturing systems. , 2015, , .		3
92	Learning Hardware-Friendly Classifiers Through Algorithmic Stability. Transactions on Embedded Computing Systems, 2016, 15, 1-29.	2.9	3
93	ReForeSt: Random Forests in Apache Spark. Lecture Notes in Computer Science, 2017, , 331-339.	1.3	3
94	Accuracy and Intrusiveness in Data-Driven Violin Players Skill Levels Prediction: MOCAP Against MYO Against KINECT. Lecture Notes in Computer Science, 2021, , 367-379.	1.3	3
95	A heterogeneous and reconfigurable machine-vision system. Machine Vision and Applications, 1995, 8, 343-350.	2.7	3
96	The benefits of adversarial defense in generalization. Neurocomputing, 2022, 505, 125-141.	5.9	3
97	Optical communication for Underwater Wireless Sensor Networks: a VHDL-implementation of a Physical Layer 802.15.4 compatible. , 2009, , .		2
98	Nature Inspiration for Support Vector Machines. Lecture Notes in Computer Science, 2006, , 442-449.	1.3	2
99	Learning Analytics for a Puzzle Game to Discover the Puzzle-Solving Tactics of Players. Lecture Notes in Computer Science, 2016, , 673-677.	1.3	2
100	Nature-inspired learning and adaptive systems. Natural Computing, 2009, 8, 197-198.	3.0	1
101	Rademacher Complexity and Structural Risk Minimization: An Application to Human Gene Expression Datasets. Lecture Notes in Computer Science, 2012, , 491-498.	1.3	1
102	Some results about the Vapnik-Chervonenkis entropy and the rademacher complexity. , 2013, , .		1
103	Smartphone battery saving by bit-based hypothesis spaces and local Rademacher Complexities. , 2014, , .		1
104	Shrinkage learning to improve SVM with hints. , 2015, , .		1
105	Crack random forest for arbitrary large datasets. , 2017, , .		1
106	Deep graph node kernels: A convex approach. , 2017, , .		1
107	Improving Railway Maintenance Actions with Big Data and Distributed Ledger Technologies. Proceedings of the International Neural Networks Society, 2020, , 120-125.	0.6	1
108	Train Overtaking Prediction in Railway Networks: A Big Data Perspective. Proceedings of the International Neural Networks Society, 2020, , 142-151.	0.6	1

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109	A Novel Procedure for Training L1-L2 Support Vector Machine Classifiers. Lecture Notes in Computer Science, 2013, , 434-441.	1.3	1
110	RAIN: Redundant array of inexpensive workstations for neurocomputing. Lecture Notes in Computer Science, 1997, , 1340-1345.	1.3	0
111	Data Mining Tools: From Web to Grid Architectures. Lecture Notes in Computer Science, 2005, , 620-629.	1.3	0
112	Out-of-Sample Error Estimation: The Blessing of High Dimensionality. , 2014, , .		0
113	Fast convergence of extended Rademacher Complexity bounds. , 2015, , .		0
114	Learn and Visually Explain Deep Fair Models: an Application to Face Recognition. , 2021, , .		0
115	Learning Hardware Friendly Classifiers Through Algorithmic Risk Minimization. Smart Innovation, Systems and Technologies, 2016, , 403-413.	0.6	0
116	Visual Analytics for Supporting Conflict Resolution in Large Railway Networks. Proceedings of the International Neural Networks Society, 2020, , 206-215.	0.6	0