Amparo Alonso Betanzos

List of Publications by Citations

172 papers	3,480 citations
28 h-index	55 g-index
194 ext. papers	4,378 ext. citations
5.3 avg, IF	5.93 L-index

#	Paper	IF	Citations
172	A review of feature selection methods on synthetic data. *Knowledge and Information Systems*, **2013**, 34, 483-519	2.4	381
171	A review of microarray datasets and applied feature selection methods. *Information Sciences*, **2014**, 282, 111-135	7.7	352
170	Recent advances and emerging challenges of feature selection in the context of big data. *Knowledge-Based Systems*, **2015**, 86, 33-45	7.3	158
169	Ensembles for feature selection: A review and future trends. *Information Fusion*, **2019**, 52, 1-12	16.7	153
168	An ensemble of filters and classifiers for microarray data classification. *Pattern Recognition*, **2012**, 45, 531-539	7.7	117
167	Feature selection and classification in multiple class datasets: An application to KDD Cup 99 dataset. *Expert Systems With Applications*, **2011**, 38, 5947-5957	7.8	117
166	Distributed feature selection: An application to microarray data classification. *Applied Soft Computing Journal*, **2015**, 30, 136-150	7.5	116
165	Ensemble feature selection: Homogeneous and heterogeneous approaches. *Knowledge-Based Systems*, **2017**, 118, 124-139	7.3	113
164	Automatic bearing fault diagnosis based on one-class ν-SVM. *Computers and Industrial Engineering*, **2013**, 64, 357-365	6.4	106
163	Filter Methods for Feature Selection A Comparative Study **2007**, 178-187		89
162	Feature Selection for High-Dimensional Data. *The Artificial Intelligence: Foundationsory, and Algorithms*, **2015**,	43	76
161	Fast-mRMR: Fast Minimum Redundancy Maximum Relevance Algorithm for High-Dimensional Big Data. *International Journal of Intelligent Systems*, **2017**, 32, 134-152	8.4	76
160	Data discretization: taxonomy and big data challenge. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, **2016**, 6, 5-21	6.9	71
159	An intelligent system for forest fire risk prediction and fire fighting management in Galicia. *Expert Systems With Applications*, **2003**, 25, 545-554	7.8	68
158	A new method for sleep apnea classification using wavelets and feedforward neural networks. *Artificial Intelligence in Medicine*, **2005**, 34, 65-76	7.4	61
157	Feature selection for high-dimensional data. *Progress in Artificial Intelligence*, **2016**, 5, 65-75	4	60
156	Data classification using an ensemble of filters. *Neurocomputing*, **2014**, 135, 13-20	5.4	57

155	A framework for cost-based feature selection. *Pattern Recognition*, **2014**, 47, 2481-2489	7.7	48
154	A global optimum approach for one-layer neural networks. *Neural Computation*, **2002**, 14, 1429-49	2.9	44
153	Intelligent analysis and pattern recognition in cardiotocographic signals using a tightly coupled hybrid system. *Artificial Intelligence*, **2002**, 136, 1-27	3.6	40
152	Linear-least-squares initialization of multilayer perceptrons through backpropagation of the desired response. *IEEE Transactions on Neural Networks*, **2005**, 16, 325-337		38
151	On developing an automatic threshold applied to feature selection ensembles. *Information Fusion*, **2019**, 45, 227-245	16.7	38
150	An Information Theory-Based Feature Selection Framework for Big Data Under Apache Spark. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2018**, 48, 1441-1453	7.3	37
149	Multispectral classification of grass weeds and wheat (Triticum durum) using linear and nonparametric functional discriminant analysis and neural networks. *Weed Research*, **2008**, 48, 28-37	1.9	37
148	Centralized vs. distributed feature selection methods based on data complexity measures. *Knowledge-Based Systems*, **2017**, 117, 27-45	7.3	36
147	A robust incremental learning method for non-stationary environments. *Neurocomputing*, **2011**, 74, 1800-1808	5.1	29
146	A new convex objective function for the supervised learning of single-layer neural networks. *Pattern Recognition*, **2010**, 43, 1984-1992	7.7	29
145	On the use of feature selection to improve the detection of sea oil spills in SAR images. *Computers and Geosciences*, **2017**, 100, 166-178	4.5	28
144	Dealing with inter-expert variability in retinopathy of prematurity: A machine learning approach. *Computer Methods and Programs in Biomedicine*, **2015**, 122, 1-15	6.9	28
143	Conversion methods for symbolic features: A comparison applied to an intrusion detection problem. *Expert Systems With Applications*, **2009**, 36, 10612-10617	7.8	28
142	A comparison of performance of K-complex classification methods using feature selection. *Information Sciences*, **2016**, 328, 1-14	7.7	27
141	ESTER: an expert system for management of respiratory weaning therapy. *IEEE Transactions on Biomedical Engineering*, **1989**, 36, 559-64	5	27
140	Can classification performance be predicted by complexity measures? A study using microarray data. *Knowledge and Information Systems*, **2017**, 51, 1067-1090	2.4	26
139	Multithreaded and Spark parallelization of feature selection filters. *Journal of Computational Science*, **2016**, 17, 609-619	3.4	26
138	Testing Different Ensemble Configurations for Feature Selection. *Neural Processing Letters*, **2017**, 46, 857-880	2.4	25

137	The NST-EXPERT project: the need to evolve. *Artificial Intelligence in Medicine*, **1995**, 7, 297-313	7.4	25
136	A methodology for improving tear film lipid layer classification. *IEEE Journal of Biomedical and Health Informatics*, **2014**, 18, 1485-93	7.2	21
135	On the scalability of feature selection methods on high-dimensional data. *Knowledge and Information Systems*, **2018**, 56, 395-442	2.4	20
134	Analysis and evaluation of hard and fuzzy clustering segmentation techniques in burned patient images. *Image and Vision Computing*, **2000**, 18, 1045-1054	3.7	19
133	A factorization approach to evaluate open-response assignments in MOOCs using preference learning on peer assessments. *Knowledge-Based Systems*, **2015**, 85, 322-328	7.3	18
132	Big-Data Analysis, Cluster Analysis, and Machine-Learning Approaches. *Advances in Experimental Medicine and Biology*, **2018**, 1065, 607-626	3.6	18
131	Distributed correlation-based feature selection in spark. *Information Sciences*, **2019**, 496, 287-299	7.7	18
130	Reducing dimensionality in a database of sleep EEG arousals. *Expert Systems With Applications*, **2011**, 38, 7746-7754	7.8	17
129	Information analysis and validation of intelligent monitoring systems in intensive care units. *IEEE Transactions on Information Technology in Biomedicine*, **1997**, 1, 87-99		17
128	Efficiency of local models ensembles for time series prediction. *Expert Systems With Applications*, **2011**, 38, 6884-6894	7.8	16
127	Exploring Guidelines for Classification of Major Heart Failure Subtypes by Using Machine Learning. *Clinical Medicine Insights: Cardiology*, **2015**, 9, 57-71	3.2	15
126	Distributed Entropy Minimization Discretizer for Big Data Analysis under Apache Spark **2015**,		15
125	On the effectiveness of discretization on gene selection of microarray data **2010**,		15
124	Nonlinear single layer neural network training algorithm for incremental, nonstationary and distributed learning scenarios. *Pattern Recognition*, **2012**, 45, 4536-4546	7.7	14
123	Performance evaluation of unsupervised techniques in cyber-attack anomaly detection. *Journal of Ambient Intelligence and Humanized Computing*, **2020**, 11, 4477-4489	3.7	14
122	Empirical evaluation of a hybrid intelligent monitoring system using different measures of effectiveness. *Artificial Intelligence in Medicine*, **2002**, 24, 71-96	7.4	13
121	Adaptive pattern recognition in the analysis of cardiotocographic records. *IEEE Transactions on Neural Networks*, **2001**, 12, 1188-95		13
120	Fault detection via recurrence time statistics and one-class classification. *Pattern Recognition Letters*, **2016**, 84, 8-14	4.7	13

119	An Agent-Based Model for Simulating Environmental Behavior in an Educational Organization. *Neural Processing Letters*, **2015**, 42, 89-118	2.4	12
118	A combination of discretization and filter methods for improving classification performance in KDD Cup 99 dataset **2009**,		12
117	One-Class Convex Hull-Based Algorithm for Classification in Distributed Environments. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2020**, 50, 386-396	7.3	12
116	A unified pipeline for online feature selection and classification. *Expert Systems With Applications*, **2016**, 55, 532-545	7.8	11
115	. *IEEE Engineering in Medicine and Biology Magazine*, **1993**, 12, 59-68		11
114	A study of performance on microarray data sets for a classifier based on information theoretic learning. *Neural Networks*, **2011**, 24, 888-96	9.1	10
113	Foetos: an expert system for fetal assessment. *IEEE Transactions on Biomedical Engineering*, **1991**, 38, 199-211	5	10
112	Large scale anomaly detection in mixed numerical and categorical input spaces. *Information Sciences*, **2019**, 487, 115-127	7.7	9
111	Toward the scalability of neural networks through feature selection. *Expert Systems With Applications*, **2013**, 40, 2807-2816	7.8	9
110	Power wind mill fault detection via one-class ν-SVM vibration signal analysis **2011**,		9
109	Functional network topology learning and sensitivity analysis based on ANOVA decomposition. *Neural Computation*, **2007**, 19, 231-57	2.9	9
108	Ensemble Feature Selection for Rankings of Features. *Lecture Notes in Computer Science*, **2015**, 29-42	0.9	8
107	Exploring the consequences of distributed feature selection in DNA microarray data **2017**,		8
106	A Wrapper Method for Feature Selection in Multiple Classes Datasets. *Lecture Notes in Computer Science*, **2009**, 456-463	0.9	8
105	A measure of fault tolerance for functional networks. *Neurocomputing*, **2004**, 62, 327-347	5.4	8
104	Linear Least-Squares Based Methods for Neural Networks Learning. *Lecture Notes in Computer Science*, **2003**, 84-91	0.9	8
103	FOETOS in clinical practice: A retrospective analysis of its performance. *Artificial Intelligence in Medicine*, **1989**, 1, 93-99	7.4	8
102	Biases in feature selection with missing data. *Neurocomputing*, **2019**, 342, 97-112	5.4	7

83	A scalable decision-tree-based method to explain interactions in dyadic data. *Decision Support Systems*, **2019**, 127, 113141	5.6	5
82	Volume, variety and velocity in Data Science. *Knowledge-Based Systems*, **2017**, 117, 1-2	7.3	4
81	Feature Selection in DNA Microarray Classification. *The Artificial Intelligence: Foundationsory, and Algorithms*, **2015**, 61-94	4.3	4
80	A minimum volume covering approach with a set of ellipsoids. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2013**, 35, 2997-3009	13.3	4
79	A Time Efficient Approach for Distributed Feature Selection Partitioning by Features. *Lecture Notes in Computer Science*, **2015**, 245-254	0.9	4
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75	Feature Selection Based on Sensitivity Analysis. *Lecture Notes in Computer Science*, **2007**, 239-248	0.9	4
74	Combining Feature Selection and Local Modelling in the KDD Cup 99 Dataset. *Lecture Notes in Computer Science*, **2009**, 824-833	0.9	4
73	Insights into distributed feature ranking. *Information Sciences*, **2019**, 496, 378-398	7.7	4
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71	On the use of different base classifiers in multiclass problems. *Progress in Artificial Intelligence*, **2017**, 6, 315-323	4	3
70	Feature selection with limited bit depth mutual information for portable embedded systems. *Knowledge-Based Systems*, **2020**, 197, 105885	7.3	3
69	Optimizing novelty and diversity in recommendations. *Progress in Artificial Intelligence*, **2019**, 8, 101-109	4	3
68	On the behavior of feature selection methods dealing with noise and relevance over synthetic scenarios **2011**,		3
67	. *IEEE Computer Applications in Power*, **1997**, 10, 36-41		3
66	Accurate initialization of neural network weights by backpropagation of the desired response		3

65			3
64	Automatic unit for monitoring and diagnosis with the contraction stress test. *Medical and Biological Engineering and Computing*, **1988**, 26, 410-5	3.1	3
63	Up-to-Date Feature Selection Methods for Scalable and Efficient Machine Learning **2013**, 1-26		3
62	Emerging Challenges. *The Artificial Intelligence: Foundationsory, and Algorithms*, **2015**, 125-132	43	3
61	Scalability Analysis of ANN Training Algorithms with Feature Selection. *Lecture Notes in Computer Science*, **2011**, 84-93	0.9	3
60	Symbolic, Neural and Neuro-fuzzy Approaches to Pattern Recognition in Cardiotocograms. *International Series in Intelligent Technologies*, **2002**, 489-500		3
59	Scalable feature selection using ReliefF aided by locality-sensitive hashing. *International Journal of Intelligent Systems*, **2021**, 36, 6161-6179	8.4	3
58	Functional Networks and Analysis of Variance for Feature Selection. *Lecture Notes in Computer Science*, **2006**, 1031-1038	0.9	3
57	A Critical Review of Feature Selection Methods. *The Artificial Intelligence: Foundationsory, and Algorithms*, **2015**, 29-60	43	2
56	Real-Time Tear Film Classification Through Cost-Based Feature Selection. *Lecture Notes in Computer Science*, **2015**, 78-98	0.9	2
55	Information Theoretic Learning and local modeling for binary and multiclass classification. *Progress in Artificial Intelligence*, **2012**, 1, 315-328	4	2
54	Interferential Tear Film Lipid Layer Classification: An Automatic Dry Eye Test **2012**,		2
53	A hybrid intelligent system for the pre-processing of Fetal Heart rate signals in antenatal testing. *Lecture Notes in Computer Science*, **1997**, 628-633	0.9	2
52	EECB: a knowledge elicitation tool based on repertory grid and city block metric. *Expert Systems With Applications*, **1998**, 14, 249-258	7.8	2
51	PATRICIA: An expert system that incorporates a patient-oriented approach for the management of ICU patients **1992**,		2
50	A connectionist approach to predict antenatal outcome **1992**,		2
49	Fast Distributed k NN Graph Construction Using Auto-tuned Locality-sensitive Hashing. *ACM Transactions on Intelligent Systems and Technology*, **2020**, 11, 1-18	8	2
48	Intelligent Monitoring and Symbolic Representation of Clinical Knowledge: An Application in Acute Ventilatory Management39-39-7		2

47	Evaluation of Ensembles for Feature Selection. *Intelligent Systems Reference Library*, **2018**, 97-113	0.8	2
46	Distributed classification based on distances between probability distributions in feature space. *Information Sciences*, **2019**, 496, 431-450	7.7	2
45	Preprocessing in High Dimensional Datasets. *Intelligent Systems Reference Library*, **2018**, 247-271	0.8	2
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43	Medical Expert Systems **2017**, 1-15		1
42	Wavefront Marching Methods: A Unified Algorithm to Solve Eikonal and Static Hamilton-Jacobi Equations. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2021**, 43, 4177-4188	13.3	1
41	Paving the way for providing teaching feedback in automatic evaluation of open response assignments **2017**,		1
40	Local Modeling Classifier for Microarray Gene-Expression Data. *Lecture Notes in Computer Science*, **2010**, 11-20	0.9	1
39	Toward an ensemble of filters for classification **2011**,		1
38	Combining functional networks and sensitivity analysis as wrapper method for feature selection. *Expert Systems With Applications*, **2011**, 38, 12930-12938	7.8	1
37	A tool for agent communication in Mozart/Oz		1
36	Automated analog-to-digital conversion of graphical cardiotocographic records. *Journal of Clinical Engineering*, **1995**, 20, 57-65	0.4	1
35	Recovering Missing Data with Functional and Bayesian Networks. *Lecture Notes in Computer Science*, **2003**, 489-496	0.9	1
34	A new learning method for single layer neural networks based on a regularized cost function. *Lecture Notes in Computer Science*, **2003**, 270-277	0.9	1
33	Feature Selection. *Intelligent Systems Reference Library*, **2018**, 13-37	0.8	1
32	When Size Matters: Markov Blanket with Limited Bit Depth Conditional Mutual Information. *Communications in Computer and Information Science*, **2020**, 243-255	0.3	1
31	Designing Decision Trees for Representing Sustainable Behaviours in Agents. *Advances in Intelligent Systems and Computing*, **2015**, 169-176	0.4	1
30	Selection of the Best Base Classifier in One-Versus-One Using Data Complexity Measures. *Lecture Notes in Computer Science*, **2016**, 110-120	0.9	1

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28	An Agent-Based Prototype for Enhancing Sustainability Behavior at an Academic Environment. *Advances in Intelligent and Soft Computing*, **2012**, 257-264		1
27	A Decision-Making Model for Environmental Behavior in Agent-Based Modeling. *Lecture Notes in Computer Science*, **2013**, 152-160	0.9	1
26	A Log Analyzer Agent for Intrusion Detection in a Multi-Agent System. *Lecture Notes in Computer Science*, **2010**, 168-177	0.9	1
25	Exact Incremental Learning for a Single Non-linear Neuron Based on Taylor Expansion and Greville Formula. *Lecture Notes in Computer Science*, **2013**, 149-158	0.9	1
24	Machine learning techniques to predict different levels of hospital care of CoVid-19. *Applied Intelligence*, **2021**, 1-19	4.9	1
23	A Measure of Noise Immunity for Functional Networks. *Lecture Notes in Computer Science*, **2001**, 293-300	0.9	1
22	Anomaly Detection on Natural Language Processing to Improve Predictions on Tourist Preferences. *Electronics (Switzerland)*, **2022**, 11, 779	2.6	1
21	Feature Selection Applied to Microarray Data. *Methods in Molecular Biology*, **2019**, 1986, 123-152	1.4	0
20	A Bayesian Neural Network Approach for Sleep Apnea Classification. *Lecture Notes in Computer Science*, **2003**, 284-293	0.9	0
19	Dealing with heterogeneity in the context of distributed feature selection for classification. *Knowledge and Information Systems*, **2021**, 63, 233-276	2.4	0
18	How important is data quality? Best classifiers vs best features. *Neurocomputing*, **2021**, 470, 365-365	5.4	0
17	Feature Selection: From the Past to the Future. *Learning and Analytics in Intelligent Systems*, **2022**, 11-34	0.3	0
16	Interactions Matter: Modelling Everyday Pro-environmental Norm Transmission and Diffusion in Workplace Networks. *Understanding Complex Systems*, **2017**, 27-52	0.4	
15	Emerging Challenges. *Intelligent Systems Reference Library*, **2018**, 173-205	0.8	
14	Foundations of Ensemble Learning. *Intelligent Systems Reference Library*, **2018**, 39-51	0.8	
13	A comparative analysis of the neonatal prognosis problem using artificial neural networks, statistical techniques and certainty management techniques. *Lecture Notes in Computer Science*, **1997**, 995-1004	0.9	
12	Modelling Engineering Problems Using Dimensional Analysis for Feature Extraction. *Lecture Notes in Computer Science*, **2005**, 949-954	0.9	

LIST OF PUBLICATIONS

11	A Comparative Study of Local Classifiers Based on Clustering Techniques and One-Layer Neural Networks **2007**, 168-177	
10	An Auto-learning System for the Classification of Fetal Heart Rate Decelerative Patterns. *Lecture Notes in Computer Science*, **2001**, 393-400	0.9
9	A Fast Classification Algorithm Based on Local Models. *Lecture Notes in Computer Science*, **2006**, 249-256	0.9
8	Software Tools. *Intelligent Systems Reference Library*, **2018**, 157-171	0.8
7	Other Ensemble Approaches. *Intelligent Systems Reference Library*, **2018**, 115-138	0.8
6	Applications of Ensembles Versus Traditional Approaches: Experimental Results. *Intelligent Systems Reference Library*, **2018**, 139-156	0.8
5	Ensembles for Feature Selection. *Intelligent Systems Reference Library*, **2018**, 53-81	0.8
4	Combination of Outputs. *Intelligent Systems Reference Library*, **2018**, 83-96	0.8
3	A JADE-Based Framework for Developing Evolutionary Multi-Agent Systems. *Advances in Intelligent and Soft Computing*, **2009**, 339-348	
2	Generating a Synthetic Population of Agents Through Decision Trees and Socio Demographic Data. *Lecture Notes in Computer Science*, **2021**, 128-140	0.9
1	Low-precision feature selection on microarray data: an information theoretic approach.. *Medical and Biological Engineering and Computing*, **2022**, 60, 1333	3.1