Alfredo Vellido Alcacena

List of Publications by Year
in descending order

77 papers	1,248 citations	361296 20 h-index	414303 32 g-index
83 all docs	83 docs citations	83 times ranked	1175 citing authors

#	Article	IF	Citations
1	The importance of interpretability and visualization in machine learning for applications in medicine and health care. Neural Computing and Applications, 2020, 32, 18069-18083.	3.2	262
2	Societal Issues Concerning the Application of Artificial Intelligence in Medicine. Kidney Diseases (Basel, Switzerland), 2019, 5, 11-17.	1.2	66
3	Quantitative Characterization and Prediction of On-Line Purchasing Behavior: A Latent Variable Approach. International Journal of Electronic Commerce, 2000, 4, 83-104.	1.4	57
4	Intelligent data analysis approaches to churn as a business problem: a survey. Knowledge and Information Systems, 2017, 51, 719-774.	2.1	42
5	Classification of human brain tumours from MRS data using Discrete Wavelet Transform and Bayesian Neural Networks. Expert Systems With Applications, 2012, 39, 5223-5232.	4.4	40
6	Convex Non-Negative Matrix Factorization for Brain Tumor Delimitation from MRSI Data. PLoS ONE, 2012, 7, e47824.	1.1	39
7	Feature and model selection with discriminatory visualization for diagnostic classification of brain tumors. Neurocomputing, 2010, 73, 622-632.	3.5	38
8	Missing data imputation through GTM as a mixture of -distributions. Neural Networks, 2006, 19, 1624-1635.	3.3	37
9	Machine learning in critical care: state-of-the-art and a sepsis case study. BioMedical Engineering OnLine, 2018, 17, 135.	1.3	33
10	Data Mining in Cancer Research [Application Notes. IEEE Computational Intelligence Magazine, 2010, 5, 14-18.	3.4	31
11	Advances in clustering and visualization of time series using GTM through time. Neural Networks, 2008, 21, 904-913.	3.3	29
12	Sepsis mortality prediction with the Quotient Basis Kernel. Artificial Intelligence in Medicine, 2014, 61, 45-52.	3.8	29
13	Non-negative matrix factorisation methods for the spectral decomposition of MRS data from human brain tumours. BMC Bioinformatics, 2012, 13, 38.	1.2	28
14	Severe sepsis mortality prediction with relevance vector machines. , 2011, 2011, 100-3.		27
15	Robust discrimination of glioblastomas from metastatic brain tumors on the basis of singleâ€voxel ‹sup›1‹/sup›H MRS. NMR in Biomedicine, 2012, 25, 819-828.	1.6	27
16	SEMI-SUPERVISED ANALYSIS OF HUMAN BRAIN TUMOURS FROM PARTIALLY LABELED MRS INFORMATION, USING MANIFOLD LEARNING MODELS. International Journal of Neural Systems, 2011, 21, 17-29.	3.2	26
17	Machine Learning for Clinical Decision-Making: Challenges and Opportunities in Cardiovascular Imaging. Frontiers in Cardiovascular Medicine, 2021, 8, 765693.	1.1	26
18	Severe sepsis mortality prediction with logistic regression over latent factors. Expert Systems With Applications, 2012, 39, 1937-1943.	4.4	25

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19	Robust analysis of MRS brain tumour data using -GTM. Neurocomputing, 2006, 69, 754-768.	3.5	24
20	Outlier exploration and diagnostic classification of a multi-centre 1H-MRS brain tumour database. Neurocomputing, 2009, 72, 3085-3097.	3.5	24
21	Artificial Intelligence for the Artificial Kidney: Pointers to the Future of a Personalized Hemodialysis Therapy. Kidney Diseases (Basel, Switzerland), 2018, 4, 1-9.	1.2	24
22	Handling outliers in brain tumour MRS data analysis through robust topographic mapping. Computers in Biology and Medicine, 2006, 36, 1049-1063.	3.9	23
23	Feature selection for the accurate prediction of septic and cardiogenic shock ICU mortality in the acute phase. PLoS ONE, 2018, 13, e0199089.	1.1	21
24	A Novel Semi-Supervised Methodology for Extracting Tumor Type-Specific MRS Sources in Human Brain Data. PLoS ONE, 2013, 8, e83773.	1.1	18
25	Automated classification of brain tumours from short echo time in vivo MRS data using Gaussian Decomposition and Bayesian Neural Networks. Expert Systems With Applications, 2014, 41, 5296-5307.	4.4	18
26	Blood Pressure Assessment with Differential Pulse Transit Time and Deep Learning: A Proof of Concept. Kidney Diseases (Basel, Switzerland), 2019, 5, 23-27.	1.2	18
27	Variational Bayesian Generative Topographic Mapping. Mathematical Modelling and Algorithms, 2008, 7, 371-387.	0.5	16
28	Discriminant Convex Non-negative Matrix Factorization for the classification of human brain tumours. Pattern Recognition Letters, 2013, 34, 1734-1747.	2.6	15
29	Binary classification of brain tumours using a Discrete Wavelet Transform and energy criteria. , 2011, , .		12
30	The influence of alignment-free sequence representations on the semi-supervised classification of class C G protein-coupled receptors. Medical and Biological Engineering and Computing, 2015, 53, 137-149.	1.6	11
31	Diagnosis of brain tumours from magnetic resonance spectroscopy using wavelets and Neural Networks. , 2010, 2010, 6074-7.		10
32	Semi-supervised geodesic Generative Topographic Mapping. Pattern Recognition Letters, 2010, 31, 202-209.	2.6	9
33	Label noise in subtype discrimination of class C G protein-coupled receptors: A systematic approach to the analysis of classification errors. BMC Bioinformatics, 2015, 16, 314.	1.2	8
34	SVM-Based Classification of Class C GPCRs from Alignment-Free Physicochemical Transformations of Their Sequences. Lecture Notes in Computer Science, 2013, , 336-343.	1.0	8
35	On the use of decision trees for ICU outcome prediction in sepsis patients treated with statins. , 2011, , .		7
36	A variational Bayesian approach for the robust analysis of the cortical silent period from EMG recordings of brain stroke patients. Neurocomputing, 2011, 74, 1301-1314.	3.5	7

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37	Systematic Analysis of Primary Sequence Domain Segments for the Discrimination Between Class C GPCR Subtypes. Interdisciplinary Sciences, Computational Life Sciences, 2018, 10, 43-52.	2.2	7
38	Unraveling response to temozolomide in preclinical GL261 glioblastoma with MRI/MRSI using radiomics and signal source extraction. Scientific Reports, 2020, 10, 19699.	1.6	7
39	Leveraging Data Science for a Personalized Haemodialysis. Kidney Diseases (Basel, Switzerland), 2020, 6, 385-394.	1.2	7
40	Using random forests for assistance in the curation of G-protein coupled receptor databases. BioMedical Engineering OnLine, 2017, 16, 75.	1.3	6
41	Extraction of artefactual MRS patterns from a large database using nonâ€negative matrix factorization. NMR in Biomedicine, 2022, 35, e4193.	1.6	6
42	Determination of feature relevance for the grouping of motor unit action potentials through a generative mixture model. Biomedical Signal Processing and Control, 2007, 2, 111-121.	3.5	5
43	A variational formulation for GTM through time. , 2008, , .		5
44	Applying Conditional Independence Maps to Improve Sepsis Prognosis. , 2016, , .		5
45	Using machine learning tools for protein database biocuration assistance. Scientific Reports, 2018, 8, 10148.	1.6	5
46	Spectral decomposition methods for the analysis of MRS information from human brain tumors. , 2011, , .		4
47	Cartogram visualization for nonlinear manifold learning models. Data Mining and Knowledge Discovery, 2013, 27, 22-54.	2.4	4
48	Reducing the n-gram feature space of class C GPCRs to subtype-discriminating patterns. Journal of Integrative Bioinformatics, 2014, 11, 99-115.	1.0	4
49	A self-organizing world: special issue of the 13th edition of the workshop on self-organizing maps and learning vector quantization, clustering and data visualization, WSOMâ€‰+â€‰2019. Neural Computing and Applications, 2022, 34, 1-3.	3.2	4
50	Automated Quality Control for Proton Magnetic Resonance Spectroscopy Data Using Convex Non-negative Matrix Factorization. Lecture Notes in Computer Science, 2016, , 719-727.	1.0	4
51	Brain tumour classification using Gaussian decomposition and neural networks. , 2011, 2011, 5645-8.		3
52	Towards interpretable classifiers with blind signal separation. , 2012, , .		3
53	The extracellular N-terminal domain suffices to discriminate class C G Protein-Coupled Receptor subtypes from n-grams of their sequences. , 2015, , .		3
54	Complementing Kernel-Based Visualization of Protein Sequences with Their Phylogenetic Tree. Lecture Notes in Computer Science, 2012, , 136-149.	1.0	3

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55	On the Use of Graphical Models to Study ICU Outcome Prediction in Septic Patients Treated with Statins. Lecture Notes in Computer Science, 2012, , 98-111.	1.0	3
56	Visual Characterization of Misclassified Class C GPCRs through Manifold-based Machine Learning Methods. Genomics and Computational Biology, 2015, 1, 19.	0.7	3
57	The effect of noise and sample size on an unsupervised feature selection method for manifold learning. , 2008, , .		2
58	On the benefits for model regularization of a variational formulation of GTM. , 2008, , .		2
59	Making nonlinear manifold learning models interpretable: The manifold grand tour. Expert Systems With Applications, 2015, 42, 8982-8988.	4.4	2
60	Artificial Intelligence and Dialysis. Kidney Diseases (Basel, Switzerland), 2019, 5, 1-2.	1.2	2
61	A systematic quantitative methodology for characterizing the business-to-consumer e-commerce market. ACM SIGBIO Newsletter, 2000, 20, 24.	0.1	2
62	Classifying malignant brain tumours from ¹H-MRS data using Breadth Ensemble Learning. , 2012, , .		1
63	Machine Learning for Critical Care: An Overview and a Sepsis Case Study. Lecture Notes in Computer Science, 2017, , 15-30.	1.0	1
64	Probability Ridges and Distortion Flows: Visualizing Multivariate Time Series Using a Variational Bayesian Manifold Learning Method. Advances in Intelligent Systems and Computing, 2014, , 55-64.	0.5	1
65	Random Forests for Quality Control in G-Protein Coupled Receptor Databases. Lecture Notes in Computer Science, 2016, , 707-718.	1.0	1
66	On the Computation of the Geodesic Distance with an Application to Dimensionality Reduction in a Neuro-Oncology Problem. Lecture Notes in Computer Science, 2011, , 483-490.	1.0	1
67	The Need for Interpretable and Explainable Deep Learning in Medicine and Healthcare. , 2022, , 247-264.		1
68	A Deep Learning-Based Method forÂUncovering GPCR Ligand-Induced Conformational States Using Interpretability Techniques. Lecture Notes in Computer Science, 2022, , 275-287.	1.0	1
69	Brain Tumor Pathological Area Delimitation through Non-negative Matrix Factorization. , 2011, , .		0
70	Interpreting response to TMZ therapy in murine GL261 glioblastoma by combining Radiomics, Convex-NMF and feature selection in MRI/MRSI data analysis. , 2020, , .		0
71	Visual Mining of Industrial Gas Turbines Sensor Data as an Industry 4.0 Application. Advances in Intelligent Systems and Computing, 2022, , 101-111.	0.5	0
72	Comparative Diagnostic Accuracy of Linear and Nonlinear Feature Extraction Methods in a Neuro-oncology Problem. Lecture Notes in Computer Science, 2011, , 34-41.	1.0	0

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73	Intelligent Management of Sepsis in the Intensive Care Unit. Advances in Medical Technologies and Clinical Practice Book Series, 2012, , 1-16.	0.3	0
74	Discovering Hidden Pathways in Bioinformatics. Lecture Notes in Computer Science, 2012, , 49-60.	1.0	0
75	Generative Manifold Learning for the Exploration of Partially Labeled Data. Computacion Y Sistemas, 2013, 17, 641-653.	0.2	0
76	Kernel Generative Topographic Mapping of Protein Sequences. , 0, , 817-830.		0
77	Artificial Intelligence in Critical Care. , 2022, , 1469-1477.		0