

Feature dimensionality reduction: a review

Complex & Intelligent Systems

8, 2663-2693

DOI: [10.1007/s40747-021-00637-x](https://doi.org/10.1007/s40747-021-00637-x)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Low Complexity Preprocessing Approach for Wireless Physical Layer Secret Key Extraction Based on PCA. <i>Wireless Personal Communications</i> , 2022, 125, 2865-2888.	2.7	2
2	Stability in time and consistency between atmospheric corrections: Assessing the reliability of Sentinel-2 products for biodiversity monitoring in tropical forests. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2022, 112, 102884.	1.9	0
3	On the feature extraction process in machine learning. An experimental study about guided versus non-guided process in falling detection systems. <i>Engineering Applications of Artificial Intelligence</i> , 2022, 114, 105170.	8.1	4
4	A combined iterative sure independence screening and Cox proportional hazard model for extracting and analyzing prognostic biomarkers of adenocarcinoma lung cancer. <i>Healthcare Analytics</i> , 2022, 2, 100108.	4.3	0
5	Sentiment Analysis: A General Review and Comparison. <i>Lecture Notes in Networks and Systems</i> , 2022, , 234-238.	0.7	0
6	Evaluation of Three Feature Dimension Reduction Techniques for Machine Learning-Based Crop Yield Prediction Models. <i>Sensors</i> , 2022, 22, 6609.	3.8	8
7	Designing the next generation of map assessment systems: Open questions and opportunities to automatically assess a student's knowledge as a map. <i>Journal of Research on Technology in Education</i> , 2023, 55, 79-93.	6.5	4
8	A machine learning-based approach for dielectric strength prediction of long air gaps with engineering configurations. <i>IET Generation, Transmission and Distribution</i> , 0, , .	2.5	0
9	Artificial intelligence-based immunoprofiling serves as a potentially predictive biomarker of nivolumab treatment for advanced hepatocellular carcinoma. <i>Frontiers in Medicine</i> , 0, 9, .	2.6	1
10	A review on Alzheimer's disease classification from normal controls and mild cognitive impairment using structural MR images. <i>Journal of Neuroscience Methods</i> , 2023, 384, 109745.	2.5	12
11	Technical Methods of National Security Supervision: Grain Storage Security as an Example. <i>Journal of Safety Science and Resilience</i> , 2022, , .	2.3	2
12	A Robust Deep Transfer Learning Model for Accurate Speech Emotion Classification. <i>Lecture Notes in Computer Science</i> , 2022, , 419-430.	1.3	0
13	A Survey on Data-Driven Scenario Generation for Automated Vehicle Testing. <i>Machines</i> , 2022, 10, 1101.	2.2	16
14	DeepCV: A Deep Learning Framework for Blind Search of Collective Variables in Expanded Configurational Space. <i>Journal of Chemical Information and Modeling</i> , 2022, 62, 6352-6364.	5.4	9
15	Federated Feature Selection for Horizontal Federated Learning in IoT Networks. <i>IEEE Internet of Things Journal</i> , 2023, 10, 10095-10112.	8.7	7
16	Coupled retrieval of heavy metal nickel concentration in agricultural soil from spaceborne hyperspectral imagery. <i>Journal of Hazardous Materials</i> , 2023, 446, 130722.	12.4	9
17	Utilization of extremely precise analytics: A State-of-the-Art Approach and Future Potentials. , 2022, , .		1
18	RN-Autoencoder: Reduced Noise Autoencoder for classifying imbalanced cancer genomic data. <i>Journal of Biological Engineering</i> , 2023, 17, .	4.7	2

#	ARTICLE	IF	CITATIONS
19	Comparative assessment of advanced machine learning techniques for simulation of lake water level fluctuations based on different dimensionality reduction methods. Earth Science Informatics, 0, , .	3.2	0
20	A stochastic approximation approach to fixed instance selection. Information Sciences, 2023, 628, 558-579.	6.9	1
21	Explaining IoT Attacks: An Effective and Efficient Semi-Supervised Learning Framework. , 2022, , .		0
22	Speech Emotion Classification: A Survey of the State-of-the-Art. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2023, , 379-394.	0.3	1
23	Patient Mortality Prediction and Analysis of Health Cloud Data Using a Deep Neural Network. Applied Sciences (Switzerland), 2023, 13, 2391.	2.5	1
24	A novel prediction method for unsteady aerodynamic force on three-dimensional folding wing aircraft. Aerospace Science and Technology, 2023, 137, 108287.	4.8	2
25	A recommender system for occupational hygiene services using natural language processing. Healthcare Analytics, 2023, 3, 100148.	4.3	2
26	A Comprehensive Analysis of techniques used for Dimensional Reduction of HSI Images. , 2022, , .		0
27	Machine Learning for Perovskite Solar Cells and Component Materials: Key Technologies and Prospects. Advanced Functional Materials, 2023, 33, .	14.9	19
28	Euler Representation-Based Structural Balance Discriminant Projection for Machinery Fault Diagnosis. Machines, 2023, 11, 307.	2.2	1
29	Identification of Antibiotic Resistance in ESKAPE Pathogens through Plasmonic Nanosensors and Machine Learning. ACS Nano, 2023, 17, 4551-4563.	14.6	11
30	Transfer Learning and Analogical Inference: A Critical Comparison of Algorithms, Methods, and Applications. Algorithms, 2023, 16, 146.	2.1	2
31	Density-Based Affinity Propagation Tensor Clustering for Intelligent Fault Diagnosis of Train Bogie Bearing. IEEE Transactions on Intelligent Transportation Systems, 2023, 24, 6053-6064.	8.0	25
32	Energy Demand Forecasting and Optimizing Electric Systems for Developing Countries. IEEE Access, 2023, 11, 39751-39775.	4.2	3
33	Small data machine learning in materials science. Npj Computational Materials, 2023, 9, .	8.7	54
34	Prediction of Array Antenna Assembly Accuracy Based on Auto-Encoder and Boosting-OSKELM. Processes, 2023, 11, 1460.	2.8	0
35	Isometric projection with reconstruction. Journal of Supercomputing, 0, , .	3.6	0
36	Chipless RFID Tag Implementation and Machine-Learning Workflow for Robust Identification. IEEE Transactions on Microwave Theory and Techniques, 2023, 71, 5147-5159.	4.6	1

#	ARTICLE	IF	CITATIONS
37	Exploring interpretable ensemble learning to predict mechanical strength and thermal conductivity of aerogel-incorporated concrete. <i>Construction and Building Materials</i> , 2023, 392, 131781.	7.2	1
38	Fault diagnosis of rotating machinery via multi-structure fusion discriminative projection. <i>Measurement Science and Technology</i> , 2023, 34, 095014.	2.6	0
39	A Comparative Analysis of various Dimensionality Reduction Techniques on N-BaloT Dataset for IoT Botnet Detection. , 2023, , .		0
40	Interclass boundary preservation (IBP): a data reduction algorithm. <i>International Journal of Information Technology (Singapore)</i> , 0, , .	2.7	0
41	Soft sensor based rapid detection of trace chlorine dioxide (ClO ₂) concentration in water. <i>Water Research</i> , 2023, 242, 120231.	11.3	2
42	Linear local tangent space alignment with autoencoder. <i>Complex & Intelligent Systems</i> , 0, , .	6.5	0
43	LiteVR: Interpretable and Lightweight Cybersickness Detection using Explainable AI. , 2023, , .		2
45	The Cost of Understanding“XAI Algorithms towards Sustainable ML in the View of Computational Cost. <i>Computation</i> , 2023, 11, 92.	2.0	1
46	Reduction and reconstruction strategy of active thermal control system based on unsupervised learning and thermo-optics for spaceborne high-resolution remote sensor. <i>Applied Thermal Engineering</i> , 2023, 230, 120676.	6.0	1
47	Feature importance“based interpretation of UMAP“visualized polymer space. <i>Molecular Informatics</i> , 2023, 42, .	2.5	1
48	Prediction Type of Codon Effect in Each Disease Based on Intelligent Data Analysis Techniques. <i>Lecture Notes in Networks and Systems</i> , 2023, , 222-236.	0.7	0
49	Employing Feature Extraction, Feature Selection, and Machine Learning to Classify Electricity Consumption as Normal or Electricity Theft. <i>SN Computer Science</i> , 2023, 4, .	3.6	0
50	Content-based comparison of communities in social networks: Ex-Yugoslavian reactions to the Russian invasion of Ukraine. <i>Applied Network Science</i> , 2023, 8, .	1.5	2
51	What Will Happen When We Radically Simplify t-SNE and“UMAP Visualization Algorithms? Is It Worth Doing So?. <i>Lecture Notes in Computer Science</i> , 2023, , 238-246.	1.3	0
52	Neural network-based strategies for automatically diagnosing of COVID-19 from X-ray images utilizing different feature extraction algorithms. <i>Network Modeling Analysis in Health Informatics and Bioinformatics</i> , 2023, 12, .	2.1	1
53	Personalized movie recommendations based on deep representation learning. <i>PeerJ Computer Science</i> , 0, 9, e1448.	4.5	0
54	Feature gene selection based on fuzzy neighborhood joint entropy. <i>Complex & Intelligent Systems</i> , 2024, 10, 129-144.	6.5	0
55	Lightweight Deep Learning Framework for Speech Emotion Recognition. <i>IEEE Access</i> , 2023, , 1-1.	4.2	1

#	ARTICLE	IF	CITATIONS
56	Neural networks based linear (PCA) and nonlinear (ISOMAP) feature extraction for soil swelling pressure prediction (North East Algeria). <i>Heliyon</i> , 2023, 9, e18673.	3.2	2
57	HSIC Induced LncRNA Feature Selection. <i>Lecture Notes in Computer Science</i> , 2023, , 191-200.	1.3	0
59	A novel approach for flood hazard assessment using hybridized ensemble models and feature selection algorithms. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2023, 122, 103443.	1.9	0
61	A hybrid anonymization pipeline to improve the privacy-utility balance in sensitive datasets for ML purposes. , 2023, , .		0
62	Advancing algorithmic drug product development: Recommendations for machine learning approaches in drug formulation. <i>European Journal of Pharmaceutical Sciences</i> , 2023, 191, 106562.	4.0	1
63	RD-Classifer: Reduced Dimensionality Classifier for Alzheimerâ€™s Diagnosis Support System. <i>Lecture Notes in Computer Science</i> , 2023, , 3-17.	1.3	0
64	Deep Autoencoder-Based Integrated Model for Anomaly Detection and Efficient Feature Extraction in IoT Networks. <i>IoT</i> , 2023, 4, 345-365.	3.8	0
65	Data Driven Dimensionality Reduction to Improve Modeling Performanceâ€±. , 2023, , .		0
66	Synergizing the enhanced RIME with fuzzy K-nearest neighbor for diagnose of pulmonary hypertension. <i>Computers in Biology and Medicine</i> , 2023, 165, 107408.	7.0	16
67	Gradientâ€based determination of principal design influences on composite structures. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2023, 23, .	0.2	0
68	Structure-Based Reaction Descriptors for Predicting Rate Constants by Machine Learning: Application to Hydrogen Abstraction from Alkanes by CH ₃ /H/O Radicals. <i>Journal of Chemical Information and Modeling</i> , 2023, 63, 5097-5106.	5.4	2
69	Deep learning models for assisted decision-making in performance optimization of thin film nanocomposite membranes. <i>Journal of Membrane Science</i> , 2023, 687, 122093.	8.2	1
70	Health diagnosis of concrete dams with continuous missing data for assessing structural deformation based on tSNEâ€™AHC algorithm and deep transfer learning. <i>Structures</i> , 2023, 57, 105134.	3.6	2
71	Ensemble of deep learning and machine learning approach for classification of handwritten Hindi numerals. <i>Journal of Engineering and Applied Science</i> , 2023, 70, .	2.0	2
72	Recursive Feature Elimination with Cross Validation for Alzheimerâ€™s Disease Classification using Cognitive Exam Scores. , 2023, , .		0
73	Clustering-Based Analysis on 5G Networks: A Comparison. , 2023, , .		1
74	Data-driven modeling of municipal water system responses to hydroclimate extremes. <i>Journal of Hydroinformatics</i> , 2023, 25, 1584-1609.	2.4	0
75	Selection of the best nitrogen fertilizer management scenario in wheat based on Palmer drought severity index with an environmental perspective. <i>European Journal of Agronomy</i> , 2023, 151, 126980.	4.1	0

#	ARTICLE	IF	CITATIONS
76	Diagnostic and Prognostic Health Management of Electric Vehicle Powertrains : A Data Driven Approach for Induction Motor. , 2023, , .		0
77	A Graph Scale Reduction Method for Graph Deep Learning-Based Transient Stability Assessment after Stability Controls. , 2023, , .		0
78	Multisensor data fusion and machine learning to classify wood products and predict workpiece characteristics during milling. CIRP Journal of Manufacturing Science and Technology, 2023, 47, 103-115.	4.5	0
79	Comparing the Performance of Feature Selection Methods for Predicting Gastric Cancer. International Journal of Cancer Management, 2023, In Press, .	0.4	0
80	Applied machine learning to analyze and predict CO2 adsorption behavior of metal-organic frameworks. Carbon Capture Science & Technology, 2023, 9, 100146.	10.4	1
81	Research on river water quality evaluation based on the GA-PP and improved fuzzy model. Water Science and Technology, 0, , .	2.5	0
84	On Dimension Reduction of Hyperspectral Images. , 2023, , .		0
85	NSOFS: a non-dominated sorting-based online feature selection algorithm. Neural Computing and Applications, 0, , .	5.6	0
86	Non-destructive quality classification of rice taste properties based on near-infrared spectroscopy and machine learning algorithms. Food Chemistry, 2023, 429, 136907.	8.2	3
87	Learning by Autonomous Manifold Deformation with an Intrinsic Deforming Field. Symmetry, 2023, 15, 1995.	2.2	0
89	Artificial intelligence applied to analyzes during the pandemic: COVID-19 beds occupancy in the state of Rio Grande do Norte, Brazil. Frontiers in Artificial Intelligence, 0, 6, .	3.4	0
90	Efficient estimation of the number of clusters for high-dimension data. Journal of Defense Modeling and Simulation, 0, , .	1.7	0
91	A Strategy to Develop and Translate Custom 5G Network Slice Templates Using Machine Learning Techniques. , 2023, , .		0
92	Mapping surface soil organic carbon density by combining different soil sampling data sources and prediction models in Yangtze River Delta, China. Catena, 2024, 235, 107656.	5.0	0
93	An efficient disease prediction framework based on optimized machine learning models for a smart healthcare application. Multimedia Tools and Applications, 0, , .	3.9	0
94	Feature Extraction from Satellite-Derived Hydroclimate Data: Assessing Impacts on Various Neural Networks for Multi-Step Ahead Streamflow Prediction. Sustainability, 2023, 15, 15761.	3.2	2
95	Comparative performance analysis of binary variants of FOX optimization algorithm with half-quadratic ensemble ranking method for thyroid cancer detection. Scientific Reports, 2023, 13, .	3.3	0
96	Low-Redundant Unsupervised Feature Selection based on Data Structure Learning and Feature Orthogonalization. Expert Systems With Applications, 2024, 240, 122556.	7.6	3

#	ARTICLE	IF	CITATIONS
97	Research on Label Distribution Dimension Reduction Algorithm Based on MLDA. , 2023, , .		0
98	Imbalance-Aware Data Based on Multi-Criteria Decision Making Integrated Feature Selection Algorithm. Journal of Sensor Technology and Application, 2023, 11, 538-549.	0.1	0
99	MultiBEATS: Blocks of eigenvalues algorithm for multivariate time series dimensionality reduction. Information Fusion, 2024, 104, 102159.	19.1	0
100	Dimensionality reduction model based on integer planning for the analysis of key indicators affecting life expectancy. Journal of Data and Information Science, 2023, 8, 102-124.	1.1	0
101	Quantifying the diversity of multiple time series with an ordinal symbolic approach. Physical Review E, 2023, 108, .	2.1	0
102	Label-Free Blood Typing by Raman Spectroscopy and Artificial Intelligence. Advanced Materials Technologies, 0, , .	5.8	0
103	Application of Deep Learning in fMRI-Based Human Brain Parcellation: A Review. Measurement Science and Technology, 0, , .	2.6	0
104	LIME-Explained Small-Scale Tabular Transformer Used for Improving the Classification Performance of Multi-Category Causes of Death in Colorectal Cancer. , 2023, , .		0
105	Multispectral Image Segmentation With Dimensionality Reduction Using Autoencoders. , 2023, , .		0
106	Classification of Student Graduation Using Backpropagation Neural Network with Features Selection and Dimensions Reduction. , 2023, , .		0
107	Exploring the dependence of gas cooling and heating functions on the incident radiation field with Machine Learning. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	0
108	Mysterious ultraslow and ordered activity observed in the cortex. Nature, 0, , .	27.8	0
109	Research on Chinese Entity Linking Based on Multi-Granularity Text Representation and Graph Neural Network. , 2023, , .		0
110	A Novel Label Selection Algorithm Based on Principal Component Analysis and Sparse Approximation Solution for Multi-label Classification*. , 2023, , .		0
112	Dimensionality Reduction-Integrated Analog-to-Digital Converters for Efficient Data Acquisition in High-Dimensional Signal Processing. , 2023, , .		0
113	Selekcja zmiennych metodami statystycznymi i uczenia maszynowego. Porównanie podejść na przykładzie danych finansowych. Metody Ilościowe W Badaniach Ekonomicznych, 2024, 24, 229-241.	0.0	0
114	Design of Motor Skill Recognition and Hierarchical Evaluation System for Table Tennis Players. IEEE Sensors Journal, 2024, 24, 5303-5315.	4.7	0
115	Detection of Respiratory Disorder and Performance Analysis from PPG Signals. IFMBE Proceedings, 2024, , 231-242.	0.3	0

#	ARTICLE	IF	CITATIONS
116	Effects of feature engineering on the robustness of laser-induced breakdown spectroscopy for industrial steel classification. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2024, 212, 106857.	2.9	0
117	Securing Mobile Edge Computing Using Hybrid Deep Learning Method. <i>Computers</i> , 2024, 13, 25.	3.3	0
118	Genomic data integration tutorial, a plant case study. <i>BMC Genomics</i> , 2024, 25, .	2.8	0
119	Selecting Heterogeneous Features Based on Unified Density-Guided Neighborhood Relation for Complex Biomedical Data Analysis. , 2023, , .		0
120	Intrusion Target Classification Based on Seismic Signals Using Parallel Neural Network With Time/Frequency Dimension Reduction. <i>IEEE Sensors Journal</i> , 2024, 24, 7055-7063.	4.7	0
121	Comparing dimensionality reduction techniques for visual analysis of the LSTM hidden activity on multi-dimensional time series modeling. <i>Visual Computer</i> , 0, , .	3.5	0
122	An Innovative Fusion of Deep Learning and the Differential Analyzer Approach (DAA-Deep model) for Enhanced Skin Cancer Detection. , 2023, , .		0
123	Financial Anomalies and Creditworthiness: A Python-Driven Machine Learning Approach Using Mahalanobis Distance for ISE-Listed Companies in the Production and Manufacturing Sector. <i>Journal of Financial Risk Management</i> , 2024, 13, 1-41.	0.4	0
124	The Feature selection and Comparison performance of Student's academic between Random Forest, Naïve bayes and XGboost. , 2023, , .		0
125	Methodology for Regional Soil Organic Matter Prediction with Spectroscopy: Optimal Sample Grouping, Input Variables, and Prediction Model. <i>Remote Sensing</i> , 2024, 16, 565.	4.0	0
126	Research on optimization algorithms for artificial intelligence network security management based on All IP Internet of Things fusion technology. <i>Computers and Electrical Engineering</i> , 2024, 115, 109105.	4.8	0
127	A multi-swarm optimizer with a reinforcement learning mechanism for large-scale optimization. <i>Swarm and Evolutionary Computation</i> , 2024, 86, 101486.	8.1	0
129	Applications of Machine Learning (ML) and Mathematical Modeling (MM) in Healthcare with Special Focus on Cancer Prognosis and Anticancer Therapy: Current Status and Challenges. <i>Pharmaceutics</i> , 2024, 16, 260.	4.5	0
130	Clinical Decision Support System Used in Spinal Disorders: Scoping Review. <i>Journal of Medical Internet Research</i> , 0, 26, e53951.	4.3	0
131	Exploring Ant Colony Optimization for Feature Selection: A Comprehensive Review. <i>Springer Tracts in Nature-inspired Computing</i> , 2024, , 45-60.	0.7	0
132	Opposition-Based Learning Binary Bat Algorithm as Feature Selection Approach in Taguchi's T-Method. , 2023, , .		0
133	A fault diagnosis method based on label-wise density-domain space learning. <i>Measurement Science and Technology</i> , 2024, 35, 055022.	2.6	0
134	The Morphological Differentiation and Evolutionary Origins of Artemia in China. <i>Diversity</i> , 2024, 16, 144.	1.7	0

#	ARTICLE	IF	CITATIONS
135	Non-Destructive Assessment of Microbial Spoilage of Broiler Breast Meat Using Structured Illumination Reflectance Imaging with Machine Learning. <i>Food Analytical Methods</i> , 2024, 17, 652-663.	2.6	0
136	Workflow-Induced Uncertainty in Data-Driven Mineral Prospectivity Mapping. <i>Natural Resources Research</i> , 0, , .	4.7	0
137	Potentials and limitations of complexity research for environmental sciences and modern farming applications. <i>Current Opinion in Environmental Sustainability</i> , 2024, 67, 101429.	6.3	0
138	Multi-objective Optimization for Feature Selection: A Review. <i>Springer Tracts in Nature-inspired Computing</i> , 2024, , 155-170.	0.7	0
139	An extensive review of hyperspectral image classification and prediction: techniques and challenges. <i>Multimedia Tools and Applications</i> , 0, , .	3.9	0
140	Hybrid whale algorithm with evolutionary strategies and filtering for high-dimensional optimization: Application to microarray cancer data. <i>PLoS ONE</i> , 2024, 19, e0295643.	2.5	0
141	Forward Selection of Relevant Factors by Means of MDR-EFE Method. <i>Mathematics</i> , 2024, 12, 831.	2.2	0
142	Hybrid similarity relation based mutual information for feature selection in intuitionistic fuzzy rough framework and its applications. <i>Scientific Reports</i> , 2024, 14, .	3.3	0
143	Predicting Rate Constants of Alkane Cracking Reactions Using Machine Learning. <i>Journal of Physical Chemistry A</i> , 2024, 128, 2383-2392.	2.5	0
144	Color-CADx: a deep learning approach for colorectal cancer classification through triple convolutional neural networks and discrete cosine transform. <i>Scientific Reports</i> , 2024, 14, .	3.3	0
145	A comprehensive survey of research towards AI-enabled unmanned aerial systems in pre-, active-, and post-wildfire management. <i>Information Fusion</i> , 2024, 108, 102369.	19.1	0