Ruchika Malhotra

List of Publications by Year
in descending order

128	3,286	201674	168389
papers	citations	27 h-index	53 g-index

134	134	134	2452
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A systematic review of machine learning techniques for software fault prediction. Applied Soft Computing Journal, 2015, 27, 504-518.	7.2	436
2	Ultrasensitive Electrochemical Immunosensor for Oral Cancer Biomarker IL-6 Using Carbon Nanotube Forest Electrodes and Multilabel Amplification. Analytical Chemistry, 2010, 82, 3118-3123.	6.5	336
3	Ultrasensitive Detection of Cancer Biomarkers in the Clinic by Use of a Nanostructured Microfluidic Array. Analytical Chemistry, 2012, 84, 6249-6255.	6.5	187
4	Empirical validation of object-oriented metrics for predicting fault proneness models. Software Quality Journal, 2010, 18, 3-35.	2.2	164
5	Nanostructured Immunosensor for Attomolar Detection of Cancer Biomarker Interleukinâ€8 Using Massively Labeled Superparamagnetic Particles. Angewandte Chemie - International Edition, 2011, 50, 7915-7918.	13.8	153
6	Single-Wall Carbon Nanotube Forest Arrays for Immunoelectrochemical Measurement of Four Protein Biomarkers for Prostate Cancer. Analytical Chemistry, 2009, 81, 9129-9134.	6.5	145
7	Empirical Study of Object-Oriented Metrics.. Journal of Object Technology, 2006, 5, 149.	0.9	112
8	Fault Prediction Using Statistical and Machine Learning Methods for Improving Software Quality. Journal of Information Processing Systems, 2012, 8, 241-262.	0.9	105
9	Empirical analysis for investigating the effect of objectâ€oriented metrics on fault proneness: a replicated case study. Software Process Improvement and Practice, 2009, 14, 39-62.	1.1	92
10	An empirical study to investigate oversampling methods for improving software defect prediction using imbalanced data. Neurocomputing, 2019, 343, 120-140.	5.9	90
11	Comparative analysis of regression and machine learning methods for predicting fault proneness models. International Journal of Computer Applications in Technology, 2009, 35, 183.	0.5	73
12	Comparative analysis of statistical and machine learning methods for predicting faulty modules. Applied Soft Computing Journal, 2014, 21, 286-297.	7.2	72
13	Investigation of relationship between object-oriented metrics and change proneness. International Journal of Machine Learning and Cybernetics, 2013, 4, 273-286.	3.6	57
14	Application of Random Forest in Predicting Fault-Prone Classes. , 2008, , .		52
15	An empirical framework for defect prediction using machine learning techniques with Android software. Applied Soft Computing Journal, 2016, 49, 1034-1050.	7.2	52
16	An empirical study for software change prediction using imbalanced data. Empirical Software Engineering, 2017, 22, 2806-2851.	3.9	52
17	Software Maintainability: Systematic Literature Review and Current Trends. International Journal of Software Engineering and Knowledge Engineering, 2016, 26, 1221-1253.	0.8	45
18	Sequential Layer Analysis of Protein Immunosensors Based on Single Wall Carbon Nanotube Forests. Langmuir, 2010, 26, 15050-15056.	3.5	41

#	Article	IF	Citations
19	On the application of search-based techniques for software engineering predictive modeling: A systematic review and future directions. Swarm and Evolutionary Computation, 2017, 32, 85-109.	8.1	38
20	An exploratory study for software change prediction in object-oriented systems using hybridized techniques. Automated Software Engineering, 2017, 24, 673-717.	2.9	37
21	Soft Computing Approaches for Prediction of Software Maintenance Effort. International Journal of Computer Applications, 2010, 1, 80-86.	0.2	35
22	Empirical validation of object-oriented metrics for predicting fault proneness at different severity levels using support vector machines. International Journal of Systems Assurance Engineering and Management, 2010, 1, 269-281.	2.4	35
23	Fault prediction considering threshold effects of objectâ€oriented metrics. Expert Systems, 2015, 32, 203-219.	4.5	34
24	DSG3 as a biomarker for the ultrasensitive detection of occult lymph node metastasis in oral cancer using nanostructured immunoarrays. Oral Oncology, 2013, 49, 93-101.	1.5	31
25	Application of Group Method of Data Handling model for software maintainability prediction using object oriented systems. International Journal of Systems Assurance Engineering and Management, 2014, 5, 165-173.	2.4	31
26	Investigating effect of Design Metrics on Fault Proneness in Object-Oriented Systems.. Journal of Object Technology, 2007, 6, 127.	0.9	31
27	Automated classification of security requirements. , 2016, , .		30
28	Software Design Metrics for Object-Oriented Software.. Journal of Object Technology, 2007, 6, 121.	0.9	29
29	Heuristic search-based approach for automated test data generation: a survey. International Journal of Bio-Inspired Computation, 2013, 5, 1.	0.9	27
30	An Adequacy Based Test Data Generation Technique Using Genetic Algorithms. Journal of Information Processing Systems, 2011, 7, 363-384.	0.9	27
31	Software defect prediction using neural networks. , 2014, , .		24
32	Defect Collection and Reporting System for Git based Open Source Software. , 2014, , .		24
33	Particle swarm optimization-based ensemble learning for software change prediction. Information and Software Technology, 2018, 102, 65-84.	4.4	24
34	Software reliability prediction using machine learning techniques. International Journal of Systems Assurance Engineering and Management, 2018, 9, 230-244.	2.4	23
35	Prediction of defect severity by mining software project reports. International Journal of Systems Assurance Engineering and Management, 2017, 8, 334-351.	2.4	21
36	Reliability modeling using Particle Swarm Optimization. International Journal of Systems Assurance Engineering and Management, 2013, 4, 275-283.	2.4	20

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37	A Regression Test Selection and Prioritization Technique. Journal of Information Processing Systems, 2010, 6, 235-252.	0.9	20
38	Dynamic selection of fitness function for software change prediction using Particle Swarm Optimization. Information and Software Technology, 2019, 112, 51-67.	4.4	16
39	License Plate Recognition System using Yolov5 and CNN. , 2022, , .		16
40	Cross project change prediction using open source projects. , 2014, , .		14
41	Handling Imbalanced Data using Ensemble Learning in Software Defect Prediction. , 2020, , .		14
42	Prioritization of Classes for Refactoring. , 2015, , .		13
43	Software change prediction: a literature review. International Journal of Computer Applications in Technology, 2016, 54, 240.	0.5	13
44	An empirical study to assess the effects of refactoring on software maintainability. , 2016, , .		11
45	Application of support vector machine to predict fault prone classes. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2009, 34, 1-6.	0.7	10
46	A new metric for predicting software change using gene expression programming. , 2014, , .		10
47	CMS tool. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2014, 39, 1-5.	0.7	10
48	Mining the impact of object oriented metrics for change prediction using Machine Learning and Search-based techniques. , 2015, , .		10
49	A Study on Software Defect Prediction using Feature Extraction Techniques. , 2020, , .		10
50	Prediction of Software Quality Model Using Gene Expression Programming. Lecture Notes in Business Information Processing, 2009, , 43-58.	1.0	9
51	Predicting change using software metrics: A review. , 2015, , .		9
52	An Exploratory Study for Predicting Maintenance Effort using Hybridized Techniques. , 2017, , .		9
53	Quantitative evaluation of web metrics for automatic genre classification of web pages. International Journal of Systems Assurance Engineering and Management, 2017, 8, 1567-1579.	2.4	9
54	An empirical study on predictability of software maintainability using imbalanced data. Software Quality Journal, 2020, 28, 1581-1614.	2.2	9

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55	A systematic literature review on empirical studies towards prediction of software maintainability. Soft Computing, 2020, 24, 16655-16677.	3.6	9
56	A neuro-fuzzy classifier for website quality prediction. , 2013, , .		8
57	Prediction of change prone classes using evolution-based and object-oriented metrics. Journal of Intelligent and Fuzzy Systems, 2018, 34, 1755-1766.	1.4	8
58	Cross project defect prediction for open source software. International Journal of Information Technology (Singapore), 2022, 14, 587-601.	2.7	8
59	Threats to validity in searchâ€based predictive modelling for software engineering. IET Software, 2018, 12, 293-305.	2.1	7
60	Transfer Learning Code Vectorizer based Machine Learning Models for Software Defect Prediction. , 2020, , .		7
61	Application of Evolutionary Algorithms for Software Maintainability Prediction using Object-Oriented Metrics. , 2015, , .		7
62	Software fault prediction for object oriented systems. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2011, 36, 1-6.	0.7	6
63	Application of adaptive neuro-fuzzy inference system for predicting software change proneness. , 2013, , .		6
64	Search based techniques for software fault prediction: current trends and future directions. , 2014, , .		6
65	A comparative study of models for predicting fault proneness in object-oriented systems. International Journal of Computer Applications in Technology, 2014, 49, 22.	0.5	6
66	On the applicability of evolutionary computation for software defect prediction. , 2014, , .		6
67	Mining defect reports for predicting software maintenance effort. , 2015, , .		6
68	Empirical comparison of machine learning algorithms for bug prediction in open source software. , 2017, , .		6
69	Analyzing and evaluating security features in software requirements. , 2016, , .		5
70	An extensive analysis of search-based techniques for predicting defective classes. Computers and Electrical Engineering, 2018, 71, 611-626.	4.8	5
71	Application of Particle Swarm Optimization for Software Defect Prediction Using Object Oriented Metrics. , 2021, , .		5
72	A Metric Suite for Predicting Software Maintainability in Data Intensive Applications. , 2014, , 161-175.		5

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73	Comparative analysis of J48 with statistical and machine learning methods in predicting fault-prone classes using object-oriented systems. Journal of Statistics and Management Systems, 2011, 14, 595-616.	0.6	4
74	An automated tool for generating change report from open-source software. , 2016, , .		4
75	Assessment of defect prediction models using machine learning techniques for object-oriented systems. , 2016, , .		4
76	Automatic test data generator: A tool based on search-based techniques. , 2016, , .		4
77	Software Reliability Prediction Using Machine Learning Techniques. Advances in Intelligent Systems and Computing, 2016, , 141-163.	0.6	4
78	Identifying threshold values of an open source software using Receiver Operating Characteristics curve (ROC). Journal of Information and Optimization Sciences, 2017, 38, 39-69.	0.3	4
79	Software change prediction using voting particle swarm optimization based ensemble classifier. , 2017, , .		4
80	Tool to handle imbalancing problem in software defect prediction using oversampling methods. , 2017, , .		4
81	On the Application of Cross-Project Validation for Predicting Maintainability of Open Source Software using Machine Learning Techniques. , 2018, , .		4
82	Parameter Tuning on Software Defect Prediction Using Differential Evolution & Simulated Annealing. , 2018, , .		4
83	A Systematic Review on Application of Deep Learning Techniques for Software Quality Predictive Modeling. , 2020, , .		4
84	Using Ensembles for Class-Imbalance Problem to Predict Maintainability of Open Source Software. International Journal of Reliability, Quality and Safety Engineering, 2020, 27, 2040011.	0.6	4
85	Defect prediction model using transfer learning. Soft Computing, 2022, 26, 4713-4726.	3.6	4
86	Examining the effectiveness of machine learning algorithms for prediction of change prone classes. , 2014, , .		3
87	Analyzing software change in open source projects using Artificial Immune System algorithms. , 2014, , .		3
88	Predicting Software Maintenance effort using neural networks. , 2015, , .		3
89	A Web Metric Collection and Reporting System. , 2015, , .		3
90	A defect tracking tool for open source software. , 2017, , .		3

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91	Improving Software Maintainability Predictions using Data Oversampling and Hybridized Techniques. , 2020, , .		3
92	Predicting Software Defects for Object-Oriented Software Using Search-based Techniques. International Journal of Software Engineering and Knowledge Engineering, 2021, 31, 193-215.	0.8	3
93	On the applicability of search-based algorithms for software change prediction. International Journal of Systems Assurance Engineering and Management, 2023, 14, 55-73.	2.4	3
94	PREDICTING SOFTWARE CHANGE IN AN OPEN SOURCE SOFTWARE USING MACHINE LEARNING ALGORITHMS. International Journal of Reliability, Quality and Safety Engineering, 2013, 20, 1350025.	0.6	2
95	Common threats to software quality predictive modeling studies using search-based techniques. , 2016, , .		2
96	Software Quality Predictive Modeling. , 2017, , .		2
97	Investigation of various data analysis techniques to identify change prone parts of an open source software. International Journal of Systems Assurance Engineering and Management, 2018, 9, 401-426.	2.4	2
98	An empirical study to investigate the impact of data resampling techniques on the performance of class maintainability prediction models. Neurocomputing, 2020, , .	5.9	2
99	Exploiting bad-smells and object-oriented characteristics to prioritize classes for refactoring. International Journal of Systems Assurance Engineering and Management, 2020, 11, 133-144.	2.4	2
100	Using Hybridized techniques for Prediction of Software Maintainability using Imbalanced data. , 2020, , .		2
101	Support Vector based Oversampling Technique for Handling Class Imbalance in Software Defect Prediction. , 2021, , .		2
102	Comparative Study of Feature Reduction Techniques in Software Change Prediction. , 2021, , .		2
103	Predicting defects in imbalanced data using resampling methods: an empirical investigation. PeerJ Computer Science, 0, 8, e573.	4.5	2
104	Analyzing and assessing the security-related defects. , 2016, , .		1
105	Assessment of machine learning algorithms for determining defective classes in an object-oriented software. , 2017, , .		1
106	Analyzing the Effectiveness of Machine Learning Algorithms for Determining Faulty Classes: A Comparative Analysis. , 2019, , .		1
107	Estimating the threshold of software metrics for web applications. International Journal of Systems Assurance Engineering and Management, 2019, 10, 110-125.	2.4	1
108	Empirical assessment of feature selection techniques in defect prediction models using web applications. Journal of Intelligent and Fuzzy Systems, 2019, 36, 6567-6578.	1.4	1

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109	Software Defect Categorization based on Maintenance Effort and Change Impact using Multinomial NaÃ¯ve Bayes Algorithm. , 2020, , .		1
110	SAGA: A Hybrid Technique to handle Imbalance Data in Software Defect Prediction. , 2021, , .		1
111	Comparative Analysis of Random Forests with Statistical and Machine Learning Methods in Predicting Fault-Prone Classes. Advances in Computational Intelligence and Robotics Book Series, 2012, , 428-449.	0.4	1
112	An Empirical Study to Classify Website Using Thresholds from Data Characteristics. Advances in Intelligent Systems and Computing, 2019, , 433-446.	0.6	1
113	Handling class imbalance problem in software maintainability prediction: an empirical investigation. Frontiers of Computer Science, 2022, 16, 1.	2.4	1
114	Transductive Instance Transfer Learning for Cross-Language Defect Prediction. , 2022, , .		1
115	A Text Mining Framework for Analyzing Change Impact and Maintenance Effort of Software Bug Reports. International Journal of Information Retrieval Research, 2022, 12, 1-18.	0.7	1
116	Ethiopic Base Characters Image Recognition using LSTM. , 2021, , .		1
117	Predicting Software Maintenance Effort by Mining Software Project Reports Using Inter-Version Validation. International Journal of Reliability, Quality and Safety Engineering, 2016, 23, 1640009.	0.6	0
118	Towards formalizing adaptive software services. , 2016, , .		0
119	An automated tool for collection of code attributes for cross project defect prediction. , 2017, , .		0
120	Design and Development of a Tool for Analyzing the Effect of Refactoring on Maintainability. , 2018, , .		0
121	Test Case Generation Using Adequacy-Based Genetic Algorithm. Lecture Notes in Networks and Systems, 2021, , 727-735.	0.7	0
122	Tackling the Imbalanced Data in Software Maintainability Prediction Using Ensembles for Class Imbalance Problem. Asset Analytics, 2021, , 391-399.	0.5	0
123	Application of Random Vector Functional Link Network for Software Defect Prediction. Advances in Intelligent Systems and Computing, 2022, , 127-143.	0.6	0
124	Analyzing Evolution Patterns of Object-Oriented Metrics. International Journal of Rough Sets and Data Analysis, 2019, 6, 49-66.	1.0	0
125	Decoding the Brain Waves using EEG signals for classifying Body Gestures by applying suitable ML & DL Techniques. , 2022, , .		0
126	A Novel Approach for Early Recognition of Cataract using VGG-16 and Custom User-based Region of Interest. , 2022, , .		0

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127	Data and Compute Efficient Image Inpainting. , 2022, , .		0
128	Comparative study of Sampling Techniques for Software Defect Prediction. , 2022, , .		0