Ruchika Malhotra

List of Publications by Year
in descending order

128 papers	3,286 citations	201674 27 h-index	168389 53 g-index
134 all docs	134 docs citations	134 times ranked	2452 citing authors

#	Article	IF	Citations
1	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
2	Cross project defect prediction for open source software. International Journal of Information Technology (Singapore), 2022, 14, 587-601.	2.7	8
3	Application of Random Vector Functional Link Network for Software Defect Prediction. Advances in Intelligent Systems and Computing, 2022, , 127-143.	0.6	0
4	Handling class imbalance problem in software maintainability prediction: an empirical investigation. Frontiers of Computer Science, 2022, 16, 1.	2.4	1
5	Decoding the Brain Waves using EEG signals for classifying Body Gestures by applying suitable ML & DL Techniques. , 2022, , .		0
6	Transductive Instance Transfer Learning for Cross-Language Defect Prediction. , 2022, , .		1
7	A Novel Approach for Early Recognition of Cataract using VGG-16 and Custom User-based Region of Interest. , 2022, , .		0
8	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
9	Defect prediction model using transfer learning. Soft Computing, 2022, 26, 4713-4726.	3.6	4
10	Data and Compute Efficient Image Inpainting. , 2022, , .		0
11	Comparative study of Sampling Techniques for Software Defect Prediction. , 2022, , .		0
12	License Plate Recognition System using Yolov5 and CNN. , 2022, , .		16
13	Test Case Generation Using Adequacy-Based Genetic Algorithm. Lecture Notes in Networks and Systems, 2021, , 727-735.	0.7	0
14	Application of Particle Swarm Optimization for Software Defect Prediction Using Object Oriented Metrics. , 2021, , .		5
15	Tackling the Imbalanced Data in Software Maintainability Prediction Using Ensembles for Class Imbalance Problem. Asset Analytics, 2021, , 391-399.	0.5	0
16	Support Vector based Oversampling Technique for Handling Class Imbalance in Software Defect Prediction. , 2021, , .		2
17	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
18	SAGA: A Hybrid Technique to handle Imbalance Data in Software Defect Prediction. , 2021, , .		1

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19	Comparative Study of Feature Reduction Techniques in Software Change Prediction. , 2021, , .		2
20	Ethiopic Base Characters Image Recognition using LSTM. , 2021, , .		1
21	An empirical study to investigate the impact of data resampling techniques on the performance of class maintainability prediction models. Neurocomputing, 2020, , .	5.9	2
22	An empirical study on predictability of software maintainability using imbalanced data. Software Quality Journal, 2020, 28, 1581-1614.	2.2	9
23	A Systematic Review on Application of Deep Learning Techniques for Software Quality Predictive Modeling. , 2020, , .		4
24	Software Defect Categorization based on Maintenance Effort and Change Impact using Multinomial NaÃ¯ve Bayes Algorithm. , 2020, , .		1
25	A Study on Software Defect Prediction using Feature Extraction Techniques. , 2020, , .		10
26	Transfer Learning Code Vectorizer based Machine Learning Models for Software Defect Prediction. , 2020, , .		7
27	Improving Software Maintainability Predictions using Data Oversampling and Hybridized Techniques. , 2020, , .		3
28	A systematic literature review on empirical studies towards prediction of software maintainability. Soft Computing, 2020, 24, 16655-16677.	3.6	9
29	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
30	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
31	Handling Imbalanced Data using Ensemble Learning in Software Defect Prediction. , 2020, , .		14
32	Using Hybridized techniques for Prediction of Software Maintainability using Imbalanced data. , 2020, , .		2
33	Analyzing the Effectiveness of Machine Learning Algorithms for Determining Faulty Classes: A Comparative Analysis. , 2019, , .		1
34	Dynamic selection of fitness function for software change prediction using Particle Swarm Optimization. Information and Software Technology, 2019, 112, 51-67.	4.4	16
35	Estimating the threshold of software metrics for web applications. International Journal of Systems Assurance Engineering and Management, 2019, 10, 110-125.	2.4	1
36	An empirical study to investigate oversampling methods for improving software defect prediction using imbalanced data. Neurocomputing, 2019, 343, 120-140.	5.9	90

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37	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
38	An Empirical Study to Classify Website Using Thresholds from Data Characteristics. Advances in Intelligent Systems and Computing, 2019, , 433-446.	0.6	1
39	Analyzing Evolution Patterns of Object-Oriented Metrics. International Journal of Rough Sets and Data Analysis, 2019, 6, 49-66.	1.0	0
40	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
41	Software reliability prediction using machine learning techniques. International Journal of Systems Assurance Engineering and Management, 2018, 9, 230-244.	2.4	23
42	On the Application of Cross-Project Validation for Predicting Maintainability of Open Source Software using Machine Learning Techniques. , 2018, , .		4
43	Design and Development of a Tool for Analyzing the Effect of Refactoring on Maintainability. , 2018, , .		0
44	Parameter Tuning on Software Defect Prediction Using Differential Evolution & Simulated Annealing. , 2018, , .		4
45	An extensive analysis of search-based techniques for predicting defective classes. Computers and Electrical Engineering, 2018, 71, 611-626.	4.8	5
46	Threats to validity in search€based predictive modelling for software engineering. IET Software, 2018, 12, 293-305.	2.1	7
47	Particle swarm optimization-based ensemble learning for software change prediction. Information and Software Technology, 2018, 102, 65-84.	4.4	24
48	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
49	Prediction of defect severity by mining software project reports. International Journal of Systems Assurance Engineering and Management, 2017, 8, 334-351.	2.4	21
50	An empirical study for software change prediction using imbalanced data. Empirical Software Engineering, 2017, 22, 2806-2851.	3.9	52
51	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
52	An Exploratory Study for Predicting Maintenance Effort using Hybridized Techniques. , 2017, , .		9
53	Software Quality Predictive Modeling. , 2017, , .		2
54	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

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55	Software change prediction using voting particle swarm optimization based ensemble classifier. , 2017, , .		4
56	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
57	An exploratory study for software change prediction in object-oriented systems using hybridized techniques. Automated Software Engineering, 2017, 24, 673-717.	2.9	37
58	Empirical comparison of machine learning algorithms for bug prediction in open source software. , 2017, , .		6
59	A defect tracking tool for open source software. , 2017, , .		3
60	Tool to handle imbalancing problem in software defect prediction using oversampling methods. , 2017, , .		4
61	An automated tool for collection of code attributes for cross project defect prediction. , 2017, , .		0
62	Assessment of machine learning algorithms for determining defective classes in an object-oriented software. , 2017, , .		1
63	Software change prediction: a literature review. International Journal of Computer Applications in Technology, 2016, 54, 240.	0.5	13
64	An automated tool for generating change report from open-source software. , 2016, , .		4
65	Assessment of defect prediction models using machine learning techniques for object-oriented systems. , 2016, , .		4
66	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
67	Automatic test data generator: A tool based on search-based techniques. , 2016, , .		4
68	An empirical framework for defect prediction using machine learning techniques with Android software. Applied Soft Computing Journal, 2016, 49, 1034-1050.	7.2	52
69	Analyzing and evaluating security features in software requirements. , 2016, , .		5
70	Analyzing and assessing the security-related defects. , 2016, , .		1
71	Common threats to software quality predictive modeling studies using search-based techniques. , 2016, , .		2
72	An empirical study to assess the effects of refactoring on software maintainability. , 2016, , .		11

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73	Software Maintainability: Systematic Literature Review and Current Trends. International Journal of Software Engineering and Knowledge Engineering, 2016, 26, 1221-1253.	0.8	45
74	Automated classification of security requirements. , 2016, , .		30
75	Towards formalizing adaptive software services. , 2016, , .		0
76	Software Reliability Prediction Using Machine Learning Techniques. Advances in Intelligent Systems and Computing, 2016, , 141-163.	0.6	4
77	Predicting change using software metrics: A review. , 2015, , .		9
78	Predicting Software Maintenance effort using neural networks. , 2015, , .		3
79	Mining the impact of object oriented metrics for change prediction using Machine Learning and Search-based techniques. , 2015, , .		10
80	Mining defect reports for predicting software maintenance effort. , 2015, , .		6
81	A Web Metric Collection and Reporting System. , 2015, , .		3
82	Fault prediction considering threshold effects of object€oriented metrics. Expert Systems, 2015, 32, 203-219.	4.5	34
83	Prioritization of Classes for Refactoring. , 2015, , .		13
84	A systematic review of machine learning techniques for software fault prediction. Applied Soft Computing Journal, 2015, 27, 504-518.	7.2	436
85	Application of Evolutionary Algorithms for Software Maintainability Prediction using Object-Oriented Metrics. , 2015, , .		7
86	Software defect prediction using neural networks. , 2014, , .		24
87	Search based techniques for software fault prediction: current trends and future directions. , 2014, , .		6
88	Defect Collection and Reporting System for Git based Open Source Software. , 2014, , .		24
89	Cross project change prediction using open source projects. , 2014, , .		14
90	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

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91	A new metric for predicting software change using gene expression programming. , 2014, , .		10
92	CMS tool. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2014, 39, 1-5.	0.7	10
93	On the applicability of evolutionary computation for software defect prediction. , 2014, , .		6
94	Examining the effectiveness of machine learning algorithms for prediction of change prone classes. , 2014, , .		3
95	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
96	Comparative analysis of statistical and machine learning methods for predicting faulty modules. Applied Soft Computing Journal, 2014, 21, 286-297.	7.2	72
97	Analyzing software change in open source projects using Artificial Immune System algorithms. , 2014, , .		3
98	A Metric Suite for Predicting Software Maintainability in Data Intensive Applications. , 2014, , 161-175.		5
99	Investigation of relationship between object-oriented metrics and change proneness. International Journal of Machine Learning and Cybernetics, 2013, 4, 273-286.	3.6	57
100	Reliability modeling using Particle Swarm Optimization. International Journal of Systems Assurance Engineering and Management, 2013, 4, 275-283.	2.4	20
101	Application of adaptive neuro-fuzzy inference system for predicting software change proneness. , 2013, , .		6
102	A neuro-fuzzy classifier for website quality prediction. , 2013, , .		8
103	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
104	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
105	Heuristic search-based approach for automated test data generation: a survey. International Journal of Bio-Inspired Computation, 2013, 5, 1.	0.9	27
106	Ultrasensitive Detection of Cancer Biomarkers in the Clinic by Use of a Nanostructured Microfluidic Array. Analytical Chemistry, 2012, 84, 6249-6255.	6.5	187
107	Fault Prediction Using Statistical and Machine Learning Methods for Improving Software Quality. Journal of Information Processing Systems, 2012, 8, 241-262.	0.9	105
108	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

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109	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
110	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
111	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
112	An Adequacy Based Test Data Generation Technique Using Genetic Algorithms. Journal of Information Processing Systems, 2011, 7, 363-384.	0.9	27
113	Soft Computing Approaches for Prediction of Software Maintenance Effort. International Journal of Computer Applications, 2010, 1, 80-86.	0.2	35
114	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
115	Empirical validation of object-oriented metrics for predicting fault proneness models. Software Quality Journal, 2010, 18, 3-35.	2.2	164
116	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
117	Sequential Layer Analysis of Protein Immunosensors Based on Single Wall Carbon Nanotube Forests. Langmuir, 2010, 26, 15050-15056.	3.5	41
118	A Regression Test Selection and Prioritization Technique. Journal of Information Processing Systems, 2010, 6, 235-252.	0.9	20
119	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
120	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
121	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
122	Prediction of Software Quality Model Using Gene Expression Programming. Lecture Notes in Business Information Processing, 2009, , 43-58.	1.0	9
123	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
124	Application of Random Forest in Predicting Fault-Prone Classes. , 2008, , .		52
125	Software Design Metrics for Object-Oriented Software.. Journal of Object Technology, 2007, 6, 121.	0.9	29
126	Investigating effect of Design Metrics on Fault Proneness in Object-Oriented Systems.. Journal of Object Technology, 2007, 6, 127.	0.9	31

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127	Empirical Study of Object-Oriented Metrics.. Journal of Object Technology, 2006, 5, 149.	0.9	112
128	Predicting defects in imbalanced data using resampling methods: an empirical investigation. PeerJ Computer Science, 0, 8, e573.	4.5	2