

Cynthia Rudin

List of Publications by Year in descending order

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Version: 2024-02-01

54
papers

6,050
citations

331538

21
h-index

243529

44
g-index

55
all docs

55
docs citations

55
times ranked

5782
citing authors

#	ARTICLE	IF	CITATIONS
1	Stop explaining black box machine learning models for high stakes decisions and use interpretable models instead. <i>Nature Machine Intelligence</i> , 2019, 1, 206-215.	8.3	3,231
2	Interpretable classifiers using rules and Bayesian analysis: Building a better stroke prediction model. <i>Annals of Applied Statistics</i> , 2015, 9, .	0.5	403
3	The Big Data Newsvendor: Practical Insights from Machine Learning. <i>Operations Research</i> , 2019, 67, 90-108.	1.2	279
4	The World Health Organization Adult Attention-Deficit/Hyperactivity Disorder Self-Report Screening Scale for <i>DSM-5</i>. <i>JAMA Psychiatry</i> , 2017, 74, 520.	6.0	230
5	Interpretable machine learning: Fundamental principles and 10 grand challenges. <i>Statistics Surveys</i> , 2022, 16, .	7.3	225
6	Machine Learning for the New York City Power Grid. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2012, 34, 328-345.	9.7	187
7	Supersparse linear integer models for optimized medical scoring systems. <i>Machine Learning</i> , 2016, 102, 349-391.	3.4	176
8	Concept whitening for interpretable image recognition. <i>Nature Machine Intelligence</i> , 2020, 2, 772-782.	8.3	123
9	A Shared Vision for Machine Learning in Neuroscience. <i>Journal of Neuroscience</i> , 2018, 38, 1601-1607.	1.7	121
10	Learning classification models of cognitive conditions from subtle behaviors in the digital Clock Drawing Test. <i>Machine Learning</i> , 2016, 102, 393-441.	3.4	111
11	Association of an Electroencephalography-Based Risk Score With Seizure Probability in Hospitalized Patients. <i>JAMA Neurology</i> , 2017, 74, 1419.	4.5	108
12	Interpretable Classification Models for Recidivism Prediction. <i>Journal of the Royal Statistical Society Series A: Statistics in Society</i> , 2017, 180, 689-722.	0.6	106
13	Machine learning for science and society. <i>Machine Learning</i> , 2014, 95, 1-9.	3.4	75
14	Clinical Prediction Models for Sleep Apnea: The Importance of Medical History over Symptoms. <i>Journal of Clinical Sleep Medicine</i> , 2016, 12, 161-168.	1.4	74
15	Optimized Scoring Systems: Toward Trust in Machine Learning for Healthcare and Criminal Justice. <i>Interfaces</i> , 2018, 48, 449-466.	1.6	60
16	A case-based interpretable deep learning model for classification of mass lesions in digital mammography. <i>Nature Machine Intelligence</i> , 2021, 3, 1061-1070.	8.3	55
17	A process for predicting manhole events in Manhattan. <i>Machine Learning</i> , 2010, 80, 1-31.	3.4	36
18	Interpretable, not black-box, artificial intelligence should be used for embryo selection. <i>Human Reproduction Open</i> , 2021, 2021, hoab040.	2.3	36

#	ARTICLE	IF	CITATIONS
19	Optimized Risk Scores. , 2017, , .		32
20	Sequential event prediction. Machine Learning, 2013, 93, 357-380.	3.4	31
21	All Models are Wrong, but are Useful: Learning a Variable's Importance by Studying an Entire Class of Prediction Models Simultaneously. Journal of Machine Learning Research, 2019, 20, .	62.4	30
22	Learning customized and optimized lists of rules with mathematical programming. Mathematical Programming Computation, 2018, 10, 659-702.	3.2	24
23	Finding Patterns with a Rotten Core: Data Mining for Crime Series with Cores. Big Data, 2015, 3, 3-21.	2.1	23
24	Box drawings for learning with imbalanced data. , 2014, , .		20
25	Analytics for Power Grid Distribution Reliability in New York City. Interfaces, 2014, 44, 364-383.	1.6	19
26	Exploring the cloud of variable importance for the set of all good models. Nature Machine Intelligence, 2020, 2, 810-824.	8.3	18
27	A holistic approach to interpretability in financial lending: Models, visualizations, and summary-explanations. Decision Support Systems, 2022, 152, 113647.	3.5	18
28	In Pursuit of Interpretable, Fair and Accurate Machine Learning for Criminal Recidivism Prediction. Journal of Quantitative Criminology, 2023, 39, 519-581.	2.0	18
29	On the Existence of Simpler Machine Learning Models. , 2022, , .		18
30	The Secrets of Machine Learning: Ten Things You Wish You Had Known Earlier to Be More Effective at Data Analysis. , 2019, , 44-72.		17
31	On combining machine learning with decision making. Machine Learning, 2014, 97, 33-64.	3.4	16
32	Approximating the crowd. Data Mining and Knowledge Discovery, 2014, 28, 1189-1221.	2.4	15
33	A supervised machine learning semantic segmentation approach for detecting artifacts in plethysmography signals from wearables. Physiological Measurement, 2021, 42, 125003.	1.2	14
34	Learning about meetings. Data Mining and Knowledge Discovery, 2014, 28, 1134-1157.	2.4	11
35	Growing a list. Data Mining and Knowledge Discovery, 2013, 27, 372-395.	2.4	10
36	Prediction uncertainty and optimal experimental design for learning dynamical systems. Chaos, 2016, 26, 063110.	1.0	10

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37	A Computational Model of Inhibition of HIV-1 by Interferon-Alpha. PLoS ONE, 2016, 11, e0152316.	1.1	9
38	Tire Changes, Fresh Air, and Yellow Flags: Challenges in Predictive Analytics for Professional Racing. Big Data, 2014, 2, 97-112.	2.1	8
39	A Bayesian Approach to Learning Scoring Systems. Big Data, 2015, 3, 267-276.	2.1	8
40	AI reflections in 2019. Nature Machine Intelligence, 2020, 2, 2-9.	8.3	6
41	A Theory of Statistical Inference for Ensuring the Robustness of Scientific Results. Management Science, 2021, 67, 6174-6197.	2.4	6
42	Ethical Implementation of Artificial Intelligence to Select Embryos in In Vitro Fertilization. , 2021, , .		6
43	How to reverse-engineer quality rankings. Machine Learning, 2012, 88, 369-398.	3.4	5
44	Causal Rule Sets for Identifying Subgroups with Enhanced Treatment Effects. INFORMS Journal on Computing, 2022, 34, 1626-1643.	1.0	5
45	Modeling recovery curves with application to prostatectomy. Biostatistics, 2019, 20, 549-564.	0.9	4
46	Estimation of system reliability using a semiparametric model. , 2011, , .		3
47	Broader Issues Surrounding Model Transparency in Criminal Justice Risk Scoring. , 2020, 2, .		3
48	Data solidarity for machine learning for embryo selection: a call for the creation of an open access repository of embryo data. Reproductive BioMedicine Online, 2022, 45, 10-13.	1.1	2
49	Modeling Weather Impact on a Secondary Electrical Grid. Procedia Computer Science, 2014, 32, 631-638.	1.2	1
50	Generalization bounds for learning with linear, polygonal, quadratic and conic side knowledge. Machine Learning, 2015, 100, 183-216.	3.4	1
51	There Once Was a Really Bad Poet, It Was Automated but You Didn't Know It. Transactions of the Association for Computational Linguistics, 2021, 9, 605-620.	3.2	1
52	Interpretable deep learning models for better clinician-AI communication in clinical mammography. , 2022, , .		1
53	TDâ€œ03: Using the Digital Clock Drawing Test and Machine Learning to Improve Accuracy of Cognitive Screening. Alzheimer's and Dementia, 2016, 12, P153.	0.4	0
54	O4-12-03: Using the Digital Clock Drawing Test and Machine Learning to Improve Accuracy of Cognitive Screening. , 2016, 12, P363-P364.		0