

# Cynthia Rudin

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

46  
papers

2,626  
citations

19  
h-index

51  
g-index

55  
ext. papers

4,206  
ext. citations

6.9  
avg, IF

7.09  
L-index

#	Paper	IF	Citations
46	Stop explaining black box machine learning models for high stakes decisions and use interpretable models instead. <i>Nature Machine Intelligence</i> , <b>2019</b> , 1, 206-215	22.5	1215
45	Interpretable classifiers using rules and Bayesian analysis: Building a better stroke prediction model. <i>Annals of Applied Statistics</i> , <b>2015</b> , 9,	2.1	230
44	Machine learning for the New York City power grid. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 328-45	13.3	132
43	The World Health Organization Adult Attention-Deficit/Hyperactivity Disorder Self-Report Screening Scale for DSM-5. <i>JAMA Psychiatry</i> , <b>2017</b> , 74, 520-527	14.5	131
42	The Big Data Newsvendor: Practical Insights from Machine Learning. <i>Operations Research</i> , <b>2019</b> , 67, 90-108	10.8	109
41	Supersparse linear integer models for optimized medical scoring systems. <i>Machine Learning</i> , <b>2016</b> , 102, 349-391	4	97
40	A Shared Vision for Machine Learning in Neuroscience. <i>Journal of Neuroscience</i> , <b>2018</b> , 38, 1601-1607	6.6	70
39	Learning Classification Models of Cognitive Conditions from Subtle Behaviors in the Digital Clock Drawing Test. <i>Machine Learning</i> , <b>2016</b> , 102, 393-441	4	69
38	Association of an Electroencephalography-Based Risk Score With Seizure Probability in Hospitalized Patients. <i>JAMA Neurology</i> , <b>2017</b> , 74, 1419-1424	17.2	64
37	Interpretable classification models for recidivism prediction. <i>Journal of the Royal Statistical Society Series A: Statistics in Society</i> , <b>2017</b> , 180, 689-722	2.1	63
36	Clinical Prediction Models for Sleep Apnea: The Importance of Medical History over Symptoms. <i>Journal of Clinical Sleep Medicine</i> , <b>2016</b> , 12, 161-8	3.1	44
35	Concept whitening for interpretable image recognition. <i>Nature Machine Intelligence</i> , <b>2020</b> , 2, 772-782	22.5	35
34	Interpretable machine learning: Fundamental principles and 10 grand challenges. <i>Statistics Surveys</i> , <b>2022</b> , 16,	1.7	34
33	A process for predicting manhole events in Manhattan. <i>Machine Learning</i> , <b>2010</b> , 80, 1-31	4	31
32	Optimized Scoring Systems: Toward Trust in Machine Learning for Healthcare and Criminal Justice. <i>Interfaces</i> , <b>2018</b> , 48, 449-466	0.7	29
31	Sequential event prediction. <i>Machine Learning</i> , <b>2013</b> , 93, 357-380	4	22
30	All Models are Wrong, but are Useful: Learning a Variable's Importance by Studying an Entire Class of Prediction Models Simultaneously. <i>Journal of Machine Learning Research</i> , <b>2019</b> , 20,	28.6	21

29	Optimized Risk Scores <b>2017</b> ,		19
28	Learning customized and optimized lists of rules with mathematical programming. <i>Mathematical Programming Computation</i> , <b>2018</b> , 10, 659-702	7.8	17
27	Finding Patterns with a Rotten Core: Data Mining for Crime Series with Cores. <i>Big Data</i> , <b>2015</b> , 3, 3-21	3.1	15
26	Analytics for Power Grid Distribution Reliability in New York City. <i>Interfaces</i> , <b>2014</b> , 44, 364-383	0.7	14
25	Box drawings for learning with imbalanced data <b>2014</b> ,		13
24	Approximating the crowd. <i>Data Mining and Knowledge Discovery</i> , <b>2014</b> , 28, 1189-1221	5.6	12
23	The Secrets of Machine Learning: Ten Things You Wish You Had Known Earlier to Be More Effective at Data Analysis <b>2019</b> , 44-72		10
22	Learning about meetings. <i>Data Mining and Knowledge Discovery</i> , <b>2014</b> , 28, 1134-1157	5.6	10
21	On combining machine learning with decision making. <i>Machine Learning</i> , <b>2014</b> , 97, 33-64	4	10
20	A Computational Model of Inhibition of HIV-1 by Interferon-Alpha. <i>PLoS ONE</i> , <b>2016</b> , 11, e0152316	3.7	8
19	Growing a list. <i>Data Mining and Knowledge Discovery</i> , <b>2013</b> , 27, 372-395	5.6	7
18	A Bayesian Approach to Learning Scoring Systems. <i>Big Data</i> , <b>2015</b> , 3, 267-76	3.1	7
17	A case-based interpretable deep learning model for classification of mass lesions in digital mammography. <i>Nature Machine Intelligence</i> , <b>2021</b> , 3, 1061-1070	22.5	7
16	Exploring the cloud of variable importance for the set of all good models. <i>Nature Machine Intelligence</i> , <b>2020</b> , 2, 810-824	22.5	6
15	Prediction uncertainty and optimal experimental design for learning dynamical systems. <i>Chaos</i> , <b>2016</b> , 26, 063110	3.3	6
14	Tire Changes, Fresh Air, and Yellow Flags: Challenges in Predictive Analytics for Professional Racing. <i>Big Data</i> , <b>2014</b> , 2, 97-112	3.1	5
13	How to reverse-engineer quality rankings. <i>Machine Learning</i> , <b>2012</b> , 88, 369-398	4	3
12	Estimation of system reliability using a semiparametric model <b>2011</b> ,		3

11	A supervised machine learning semantic segmentation approach for detecting artifacts in plethysmography signals from wearables. <i>Physiological Measurement</i> , <b>2021</b> ,	2.9	3
10	Modeling recovery curves with application to prostatectomy. <i>Biostatistics</i> , <b>2019</b> , 20, 549-564	3.7	3
9	Ethical Implementation of Artificial Intelligence to Select Embryos in In Vitro Fertilization <b>2021</b> ,		2
8	A holistic approach to interpretability in financial lending: Models, visualizations, and summary-explanations. <i>Decision Support Systems</i> , <b>2021</b> , 152, 113647	5.6	2
7	AI reflections in 2019. <i>Nature Machine Intelligence</i> , <b>2020</b> , 2, 2-9	22.5	1
6	Modeling Weather Impact on a Secondary Electrical Grid. <i>Procedia Computer Science</i> , <b>2014</b> , 32, 631-638	1.6	1
5	Generalization bounds for learning with linear, polygonal, quadratic and conic side knowledge. <i>Machine Learning</i> , <b>2015</b> , 100, 183-216	4	1
4	There Once Was a Really Bad Poet, It Was Automated but You Didn't Know It. <i>Transactions of the Association for Computational Linguistics</i> , <b>2021</b> , 9, 605-620	5.6	1
3	In Pursuit of Interpretable, Fair and Accurate Machine Learning for Criminal Recidivism Prediction. <i>Journal of Quantitative Criminology</i> , 1	2.8	1
2	TD-P-003: Using the Digital Clock Drawing Test and Machine Learning to Improve Accuracy of Cognitive Screening <b>2016</b> , 12, P153-P153		
1	O4-12-03: Using the Digital Clock Drawing Test and Machine Learning to Improve Accuracy of Cognitive Screening <b>2016</b> , 12, P363-P364		