Nan Liu

List of Publications by Year in Descending Order

107 papers	**1,740** citations
23 h-index	**39** g-index
131 ext. papers	**2,300** ext. citations
4.3 avg, IF	**5.07** L-index

#	Paper	IF	Citations
107	Gender disparities among adult recipients of layperson bystander cardiopulmonary resuscitation by location of cardiac arrest in Pan-Asian communities: A registry-based study.. *EClinicalMedicine*, **2022**, 44, 101293	11.3	0
106	Leveraging Large-Scale Electronic Health Records and Interpretable Machine Learning for Clinical Decision Making at the Emergency Department: Protocol for System Development and Validation.. *JMIR Research Protocols*, **2022**, 11, e34201	2	0
105	Development and validation of an interpretable machine learning scoring tool for estimating time to emergency readmissions.. *EClinicalMedicine*, **2022**, 45, 101315	11.3	0
104	Shapley variable importance cloud for interpretable machine learning.. *Patterns*, **2022**, 3, 100452	5.1	4
103	The effect of building-level socioeconomic status on bystander cardiopulmonary resuscitation: a retrospective cohort study.. *Prehospital Emergency Care*, **2022**, 1-17	2.8	0
102	AutoScore-Imbalance: An Interpretable Machine Learning Tool for Development of Clinical Scores with Rare Events Data.. *Journal of Biomedical Informatics*, **2022**, 104072	10.2	0
101	Development and validation of an interpretable clinical score for early identification of acute kidney injury at the emergency department.. *Scientific Reports*, **2022**, 12, 7111	4.9	0
100	Proper Use of Multiple Imputation and Dealing with Missing Covariate Data.. *World Neurosurgery*, **2022**, 161, 284-290	2.1	0
99	Implementation of prediction models in the emergency department from an implementation science perspective-Determinants, outcomes and real-world impact: A scoping review protocol.. *PLoS ONE*, **2022**, 17, e0267965	3.7	0
98	Development and validation of an interpretable prehospital return of spontaneous circulation (P-ROSC) score for patients with out-of-hospital cardiac arrest using machine learning: A retrospective study. *EClinicalMedicine*, **2022**, 48, 101422	11.3	1
97	Association of High-Volume Centers With Survival Outcomes Among Patients With Nontraumatic Out-of-Hospital Cardiac Arrest. *JAMA Network Open*, **2022**, 5, e2214639	10.4	1
96	Impact of Cardiac Arrest Centers on the Survival of Patients With Nontraumatic Out-of-Hospital Cardiac Arrest: A Systematic Review and Meta-Analysis.. *Journal of the American Heart Association*, **2021**, e023806	6	3
95	Deep Learning for Temporal Data Representation in Electronic Health Records: A Systematic Review of Challenges and Methodologies.. *Journal of Biomedical Informatics*, **2021**, 126, 103980	10.2	2
94	Evaluation of Machine Learning Methods Developed for Prediction of Diabetes Complications: A Systematic Review. *Journal of Diabetes Science and Technology*, **2021**, 19322968211056917	4.1	1
93	Development and validation of the SARICA score to predict survival after return of spontaneous circulation in out of hospital cardiac arrest using an interpretable machine learning framework. *Resuscitation*, **2021**, 170, 126-133	4	1
92	AutoScore-Survival: Developing interpretable machine learning-based time-to-event scores with right-censored survival data. *Journal of Biomedical Informatics*, **2021**, 125, 103959	10.2	2
91	A clinical predictive model for risk stratification of patients with severe acute lower gastrointestinal bleeding. *World Journal of Emergency Surgery*, **2021**, 16, 58	9.2	0

90	Early prediction of serious infections in febrile infants incorporating heart rate variability in an emergency department: a pilot study. *Emergency Medicine Journal*, **2021**, 38, 607-612	1.5	2
89	Utilizing machine learning dimensionality reduction for risk stratification of chest pain patients in the emergency department. *BMC Medical Research Methodology*, **2021**, 21, 74	4.7	1
88	Artificial Intelligence Applications for COVID-19 in Intensive Care and Emergency Settings: A Systematic Review. *International Journal of Environmental Research and Public Health*, **2021**, 18,	4.6	5
87	Effective Treatment Recommendations for Type 2 Diabetes Management Using Reinforcement Learning: Treatment Recommendation Model Development and Validation. *Journal of Medical Internet Research*, **2021**, 23, e27858	7.6	0
86	Development and Assessment of an Interpretable Machine Learning Triage Tool for Estimating Mortality After Emergency Admissions. *JAMA Network Open*, **2021**, 4, e2118467	10.4	9
85	Heart rate n-variability (HRnV) measures for prediction of mortality in sepsis patients presenting at the emergency department. *PLoS ONE*, **2021**, 16, e0249868	3.7	1
84	Relationship between local weather, air pollution and hospital attendances for urticaria in children: Time stratified analysis of 12,002 cases. *Clinical and Experimental Allergy*, **2021**,	4.1	1
83	Trends of chronic illness in emergency department admissions among elderly adults in a tertiary hospital over ten years. *BMC Health Services Research*, **2021**, 21, 1305	2.9	0
82	Impact of the COVID-19 pandemic on the epidemiology of out-of-hospital cardiac arrest: a systematic review and meta-analysis. *Annals of Intensive Care*, **2021**, 11, 169	8.9	9
81	Coronavirus disease 2019 (COVID-19): an evidence map of medical literature. *BMC Medical Research Methodology*, **2020**, 20, 177	4.7	42
80	Validation of the ROSC after cardiac arrest (RACA) score in Pan-Asian out-of-hospital cardiac arrest patients. *Resuscitation*, **2020**, 149, 53-59	4	5
79	Heart rate n-variability (HRnV) and its application to risk stratification of chest pain patients in the emergency department. *BMC Cardiovascular Disorders*, **2020**, 20, 168	2.3	8
78	AutoScore: A Machine Learning-Based Automatic Clinical Score Generator and Its Application to Mortality Prediction Using Electronic Health Records. *JMIR Medical Informatics*, **2020**, 8, e21798	3.6	24
77	Impact of Air Pollution and Trans-Boundary Haze on Nation-Wide Emergency Department Visits and Hospital Admissions in Singapore. *Annals of the Academy of Medicine, Singapore*, **2020**, 49, 78-87	2.8	3
76	Utilizing Machine Learning Methods for Preoperative Prediction of Postsurgical Mortality and Intensive Care Unit Admission. *Annals of Surgery*, **2020**, 272, 1133-1139	7.8	27
75	Individualized fluid administration for critically ill patients with sepsis with an interpretable dynamic treatment regimen model. *Scientific Reports*, **2020**, 10, 17874	4.9	4
74	Analytics with artificial intelligence to advance the treatment of acute respiratory distress syndrome. *Journal of Evidence-Based Medicine*, **2020**, 13, 301-312	6.1	19
73	Risk stratification of patients with atrial fibrillation in the emergency department. *American Journal of Emergency Medicine*, **2020**, 38, 1807-1815	2.9	2

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72	Predictive Modeling of Hospital Readmissions with Sparse Bayesian Extreme Learning Machine. *Proceedings in Adaptation, Learning and Optimization*, **2020**, 191-196	0.2	
71	Prediction of ROSC After Cardiac Arrest Using Machine Learning. *Studies in Health Technology and Informatics*, **2020**, 270, 1357-1358	0.5	
70	Time-Stratified Case Crossover Study of the Association of Outdoor Ambient Air Pollution With the Risk of Acute Myocardial Infarction in the Context of Seasonal Exposure to the Southeast Asian Haze Problem. *Journal of the American Heart Association*, **2019**, 8, e011272	6	23
69	Combining Heart Rate Variability with Disease Severity Score Variables for Mortality Risk Stratification in Septic Patients Presenting at the Emergency Department. *International Journal of Environmental Research and Public Health*, **2019**, 16,	4.6	10
68	Development of a heart rate variability and complexity model in predicting the need for life-saving interventions amongst trauma patients. *Burns and Trauma*, **2019**, 7, 12	5.3	
67	Mechanical power normalized to predicted body weight as a predictor of mortality in patients with acute respiratory distress syndrome. *Intensive Care Medicine*, **2019**, 45, 856-864	14.5	49
66	Combining quick sequential organ failure assessment score with heart rate variability may improve predictive ability for mortality in septic patients at the emergency department. *PLoS ONE*, **2019**, 14, e0213445	3.7	11
65	Heart rate variability based machine learning models for risk prediction of suspected sepsis patients in the emergency department. *Medicine (United States)*, **2019**, 98, e14197	1.8	39
64	Serial Heart Rate Variability Measures for Risk Prediction of Septic Patients in the Emergency Department **2019**, 2019, 285-294	0.7	1
63	Novel model for predicting inpatient mortality after emergency admission to hospital in Singapore: retrospective observational study. *BMJ Open*, **2019**, 9, e031382	3	10
62	Comparison of two emergency medical services in Beijing and Hong Kong, China. *Chinese Medical Journal*, **2019**, 132, 1372-1374	2.9	0
61	Validation of the mortality in emergency department sepsis (MEDS) score in a Singaporean cohort. *Medicine (United States)*, **2019**, 98, e16962	1.8	3
60	Outcomes and modifiable resuscitative characteristics amongst pan-Asian out-of-hospital cardiac arrest occurring at night. *Medicine (United States)*, **2019**, 98, e14611	1.8	5
59	Predicting hospital admission at the emergency department triage: A novel prediction model. *American Journal of Emergency Medicine*, **2019**, 37, 1498-1504	2.9	38
58	Integrating heart rate variability, vital signs, electrocardiogram, and troponin to triage chest pain patients in the ED. *American Journal of Emergency Medicine*, **2018**, 36, 185-192	2.9	5
57	A novel heart rate variability based risk prediction model for septic patients presenting to the emergency department. *Medicine (United States)*, **2018**, 97, e10866	1.8	21
56	Association between the elderly frequent attender to the emergency department and 30-day mortality: A retrospective study over 10 years. *World Journal of Emergency Medicine*, **2018**, 9, 20-25	1.9	11
55	Heart Rate Variability Analysis in Patients Who Have Bradycardia Presenting to the Emergency Department with Chest Pain. *Journal of Emergency Medicine*, **2018**, 54, 273-280	1.5	2

54	Clinical scores for risk stratification of chest pain patients in the emergency department: an updated systematic review. *Journal of Emergency and Critical Care Medicine*, **2018**, 2, 16-16	0.6	8
53	Artificial intelligence in emergency medicine. *Journal of Emergency and Critical Care Medicine*, **2018**, 2, 82-82	0.6	13
52	The top 2,000 cited articles in critical care medicine: a bibliometric analysis. *Journal of Thoracic Disease*, **2018**, 10, 2437-2447	2.6	8
51	Frequent hospital admissions in Singapore: clinical risk factors and impact of socioeconomic status. *Singapore Medical Journal*, **2018**, 59, 39-43	1.9	24
50	**2018**,		4
49	Health impacts of the Southeast Asian haze problem - A time-stratified case crossover study of the relationship between ambient air pollution and sudden cardiac deaths in Singapore. *International Journal of Cardiology*, **2018**, 271, 352-358	3.2	24
48	The Relationship Between Ambient Air Pollution and Acute Ischemic Stroke: A Time-Stratified Case-Crossover Study in a City-State With Seasonal Exposure to the Southeast Asian Haze Problem. *Annals of Emergency Medicine*, **2018**, 72, 591-601	2.1	16
47	Reperfusion treatment delays amongst patients with painless ST segment elevation myocardial infarction. *Canadian Journal of Emergency Medicine*, **2017**, 19, 355-363	0.6	8
46	Ensemble-Based Risk Scoring with Extreme Learning Machine for Prediction of Adverse Cardiac Events. *Cognitive Computation*, **2017**, 9, 545-554	4.4	17
45	Extreme learning machine based mutual information estimation with application to time-series change-points detection. *Neurocomputing*, **2017**, 261, 204-216	5.4	4
44	FAM-FACE-SG: a score for risk stratification of frequent hospital admitters. *BMC Medical Informatics and Decision Making*, **2017**, 17, 35	3.6	10
43	Evaluation of a practical expert defined approach to patient population segmentation: a case study in Singapore. *BMC Health Services Research*, **2017**, 17, 771	2.9	13
42	Performance of the LACE index to identify elderly patients at high risk for hospital readmission in Singapore. *Medicine (United States)*, **2017**, 96, e6728	1.8	17
41	Electric bicycle-related injuries presenting to a provincial hospital in China: A retrospective study. *Medicine (United States)*, **2017**, 96, e7395	1.8	16
40	Leveraging on Predictive Analytics to Manage Clinic No Show and Improve Accessibility of Care **2017**,		5
39	Emergency Medical Services Utilization among Patients with ST-Segment Elevation Myocardial Infarction: Observations from the Singapore Myocardial Infarction Registry. *Prehospital Emergency Care*, **2016**, 20, 454-61	2.8	18
38	Comparing HEART, TIMI, and GRACE scores for prediction of 30-day major adverse cardiac events in high acuity chest pain patients in the emergency department. *International Journal of Cardiology*, **2016**, 221, 759-64	3.2	34
37	A novel cardiovascular risk stratification model incorporating ECG and heart rate variability for patients presenting to the emergency department with chest pain. *Critical Care*, **2016**, 20, 179	10.8	18

36	Associations between gender and cardiac arrest outcomes in Pan-Asian out-of-hospital cardiac arrest patients. *Resuscitation*, **2016**, 102, 116-21	4	42
35	Characteristics of patients who made a return visit within 72 hours to the emergency department of a Singapore tertiary hospital. *Singapore Medical Journal*, **2016**, 57, 301-6	1.9	14
34	Predicting 30-Day Readmissions in an Asian Population: Building a Predictive Model by Incorporating Markers of Hospitalization Severity. *PLoS ONE*, **2016**, 11, e0167413	3.7	23
33	Housing as a Social Determinant of Health in Singapore and Its Association with Readmission Risk and Increased Utilization of Hospital Services. *Frontiers in Public Health*, **2016**, 4, 109	6	31
32	A prospective surveillance of paediatric head injuries in Singapore: a dual-centre study. *BMJ Open*, **2016**, 6, e010618	3	16
31	Predicting frequent hospital admission risk in Singapore: a retrospective cohort study to investigate the impact of comorbidities, acute illness burden and social determinants of health. *BMJ Open*, **2016**, 6, e012705	3	20
30	Predictors for moderate to severe paediatric head injury derived from a surveillance registry in the emergency department. *Injury*, **2015**, 46, 1270-4	2.5	7
29	Predictive modeling in pediatric traumatic brain injury using machine learning. *BMC Medical Research Methodology*, **2015**, 15, 22	4.7	31
28	Landmark recognition with sparse representation classification and extreme learning machine. *Journal of the Franklin Institute*, **2015**, 352, 4528-4545	4	68
27	Ensemble of subset online sequential extreme learning machine for class imbalance and concept drift. *Neurocomputing*, **2015**, 149, 316-329	5.4	109
26	Analysis of patient outcome using ECG and extreme learning machine ensemble **2015**,		2
25	Predicting 30-Day Readmissions: Performance of the LACE Index Compared with a Regression Model among General Medicine Patients in Singapore. *BioMed Research International*, **2015**, 2015, 169870	2	46
24	Effects of two new features of approximate entropy and sample entropy on cardiac arrest prediction **2015**,		2
23	Manifold ranking based scoring system with its application to cardiac arrest prediction: A retrospective study in emergency department patients. *Computers in Biology and Medicine*, **2015**, 67, 74-82	7	8
22	Landmark recognition via sparse representation **2015**,		3
21	Risk stratification for prediction of adverse coronary events in emergency department chest pain patients with a machine learning score compared with the TIMI score. *International Journal of Cardiology*, **2014**, 177, 1095-7	3.2	8
20	Validation of a risk scoring model for prediction of acute cardiac complications in chest pain patients presenting to the Emergency Department. *International Journal of Cardiology*, **2014**, 176, 1091-3	3.2	5
19	Prediction of adverse cardiac events in emergency department patients with chest pain using machine learning for variable selection. *BMC Medical Informatics and Decision Making*, **2014**, 14, 75	3.6	46

18	Risk scoring for prediction of acute cardiac complications from imbalanced clinical data. *IEEE Journal of Biomedical and Health Informatics*, **2014**, 18, 1894-902	7.2	27
17	Risk Stratification with Extreme Learning Machine: A Retrospective Study on Emergency Department Patients. *Mathematical Problems in Engineering*, **2014**, 2014, 1-6	1.1	2
16	Evolutionary Voting-Based Extreme Learning Machines. *Mathematical Problems in Engineering*, **2014**, 2014, 1-7	1.1	4
15	Evolutionary Extreme Learning Machine and Its Application to Image Analysis. *Journal of Signal Processing Systems*, **2013**, 73, 73-81	1.4	13
14	Voting based extreme learning machine. *Information Sciences*, **2012**, 185, 66-77	7.7	247
13	Prediction of cardiac arrest in critically ill patients presenting to the emergency department using a machine learning score incorporating heart rate variability compared with the modified early warning score. *Critical Care*, **2012**, 16, R108	10.8	72
12	An intelligent scoring system and its application to cardiac arrest prediction. *IEEE Transactions on Information Technology in Biomedicine*, **2012**, 16, 1324-31		21
11	Weighted principal component extraction with genetic algorithms. *Applied Soft Computing Journal*, **2012**, 12, 961-974	7.5	7
10	Patient Outcome Prediction with Heart Rate Variability and Vital Signs. *Journal of Signal Processing Systems*, **2011**, 64, 265-278	1.4	24
9	Ensemble Based Extreme Learning Machine. *IEEE Signal Processing Letters*, **2010**, 17, 754-757	3.2	171
8	Modeling Images With Multiple Trace Transforms for Pattern Analysis. *IEEE Signal Processing Letters*, **2009**, 16, 394-397	3.2	1
7	Improving predictive accuracy by evolving feature selection for face recognition. *IEICE Electronics Express*, **2008**, 5, 1061-1066	0.5	1
6	Association of air pollution with acute ischemic stroke risk in Singapore: a time-stratified case-crossover study. *International Journal of Stroke*, 174749302110667	6.3	0
5	AutoScore: A Machine Learning–Based Automatic Clinical Score Generator and Its Application to Mortality Prediction Using Electronic Health Records (Preprint)		1
4	Heart Rate n-Variability (HRnV): A Novel Representation of Beat-to-Beat Variation in Electrocardiogram		2
3	AKI Risk Score (AKI-RiSc): Developing an Interpretable Clinical Score for Early Identification of Acute Kidney Injury for Patients Presenting to the Emergency Department		1
2	Score for Emergency Risk Prediction (SERP): An Interpretable Machine Learning AutoScore-Derived Triage Tool for Predicting Mortality after Emergency Admissions		1
1	Artificial Intelligence Applications for COVID-19 in Intensive Care and Emergency Settings: A Systematic Review		1