

# Han Yuan

## EDUCATION & ACADEMIC EXPERIENCE

\* Specialization: A series of related courses

<b>Duke-NUS Medical School</b> , Singapore	Aug. 2020 – Jul. 2024
Ph.D. Degree in Biostatistics and Health Data Science	Advisor: <a href="#">Dr. Nan Liu</a>
<b>Duke University</b> , Durham, United States	Jun. – Jul. 2023
Research Scholar, Department of Biostatistics and Bioinformatics	Advisor: <a href="#">Dr. Chuan Hong</a>
<b>University of Zurich</b> , Zurich, Switzerland	Jan. – Jun. 2022
Research Scholar, Department of Quantitative Biomedicine	Advisor: <a href="#">Dr. Michael Krauthammer</a>
<b>Harvard University</b> , Boston, United States	Jul. 2019 – Jan. 2020
Research Scholar, Departments of Epidemiology and Biostatistics	Advisor: <a href="#">Dr. Molin Wang</a>
<b>Nankai University</b> , Tianjin, China	Sept. 2015 – Jun. 2019
Double B.S. Degrees in Biotechnology and Applied Mathematics	Ranking: 1st/79, GPA: 3.7/4.0
Data Science Math Skills ( <a href="#">Cert.</a> by Duke), Mathematics for Machine Learning* ( <a href="#">Cert.</a> by ICL), Machine Learning ( <a href="#">Cert.</a> by Duke), Clinical Decision Making using Deep Learning* ( <a href="#">Cert.</a> by UG), Deep Learning with PyTorch ( <a href="#">Cert.1</a> , <a href="#">Cert.2</a> , <a href="#">Cert.3</a> , <a href="#">Cert.4</a> , <a href="#">Cert.5</a> )	

## EDITORIAL ACTIVITIES

Referee, <b>Data Science Journal</b>	Jul. 2023 – Present
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## PUBLICATIONS & SOFTWARE

\* Equal contribution

Yuan, H., ... & Zhao, G. (2023). <a href="#">Human-Guided Design to Explain Deep Learning-based Pneumothorax Classifier</a> . Medical Imaging with Deep Learning, Short Paper Track.	
Liu, M., ... Yuan, H. ... & Liu, N. (2023). <a href="#">Handling missing values in healthcare data: A systematic review of deep learning-based imputation techniques</a> . Artificial Intelligence in Medicine.	
Yuan, H.*, ... & Wu, Y. (2023). <a href="#">An empirical study of the effect of background data size on the stability of SHapley Additive exPlanations for deep learning models</a> . International Conference on Learning Representations, Tiny Paper Track.	
Yuan, H., ... & Xie, F. (2023). <a href="#">Interpretable Machine Learning-Based Risk Scoring with Individual and Ensemble Model Selection for Clinical Decision Making</a> . International Conference on Learning Representations, Tiny Paper Track.	
Kang, L., Yuan, H. & Zhu C. (2023). <a href="#">Error Analysis of Fitted Q-iteration with ReLU-activated Deep Neural Networks</a> . International Conference on Learning Representations, Tiny Paper Track.	
Xie, F., ... Yuan, H. ... & Liu, N. (2023). <a href="#">A universal AutoScore framework to develop interpretable scoring systems for predicting common types of clinical outcomes</a> . STAR Protocols.	
Yuan, H., ... & Liu, N. (2022). <a href="#">AutoScore-Imbalance: An interpretable machine learning tool for development of clinical scores with rare events data</a> . Journal of Biomedical Informatics.	
Xie, F., ... Yuan, H., ... & Chakraborty, B. (2022). <a href="#">AutoScore-Survival: Developing interpretable machine learning-based time-to-event scores with right-censored survival data</a> . Journal of Biomedical Informatics.	
Xie, F.*, Yuan, H.*, ... & Liu, N. (2021). <a href="#">Deep learning for temporal data representation in electronic health records: A systematic review of challenges and methodologies</a> . Journal of Biomedical Informatics.	
Miao, C., ... Yuan, H., ... & Wang, Z. (2021). <a href="#">TRIM37 orchestrates renal cell carcinoma progression via histone H2A ubiquitination-dependent manner</a> . Journal of Experimental & Clinical Cancer Research.	
Xie, F., ... Yuan, H., ... & Liu, N. (2021). <a href="#">Package 'AutoScore': An Interpretable Machine Learning-Based Automatic Clinical Score Generator</a> . R Package.	
Zhao, Y.*, Yuan, H.* & Wu, Y. (2021). <a href="#">Prediction of Adverse Drug Reaction using Machine Learning Based on an Imbalanced Electronic Medical Records Dataset</a> . International Conference on Medical and Health Informatics, Full Paper Track.	
Zhang, J. J., ... Yuan, H., & Wang, M. (2020). <a href="#">Alternatives to the Kaplan-Meier estimator of progression-free survival</a> . The International Journal of Biostatistics.	
Miao, C.*, ... Yuan, H.*, ... & Wang, Z. (2020). <a href="#">Effect of Enhanced Recovery After Surgery on Postoperative Recovery and Quality of Life in Patients Undergoing Laparoscopic Partial Nephrectomy</a> . Frontiers in Oncology.	

## HONORS & AWARDS

The Runner-up of the 7th Annual Ph.D. Student Research Symposium, Duke-NUS Medical School	2022
Khoo Pre-Doctoral Fellowship, Duke-NUS Medical School	2020 & 2021 & 2022 & 2023
Merit Graduates (Top 5% Graduates), Nankai University	2019
The Third Prize of Undergraduate Scientific Research (Top 20% Groups), Tianjin Municipal Education Commission	2018

The First Prize of Excellent Undergraduate Scholarship (Top 5% Students), Nankai University	2016 & 2017
Merit Student (Top 10% Students), Nankai University	2016

## EXTRACURRICULAR ACTIVITIES

Data Analyst Intern, Comprehensive Cancer Center Zurich, <b>University Hospital Zurich</b>	Jan. – Jun. 2022
<ul style="list-style-type: none"> <li>Developed several multi-modality models to facilitate medical diagnoses.</li> </ul>	
Data Analyst Intern, Channing Division of Network Medicine, <b>Brigham Health</b>	Aug. – Dec. 2019
<ul style="list-style-type: none"> <li>Compared and selected statistical models on different longitudinal datasets.</li> <li>Debugged algorithm and simplified time and space complexity of algorithm's code on R.</li> </ul>	
Data Analyst Intern, Division of Macroeconomic Research, <b>Founder Securities</b>	Aug. – Sept. 2017
<ul style="list-style-type: none"> <li>Conducted macro-economy analysis using records from Bloomberg and the National Bureau of Statistics.</li> <li>Finished 5+ drafts of macroeconomic research reports and 10+ industrial data reviews.</li> </ul>	
Finance Intern, Jiangsu Branch, <b>Bank of China</b>	Aug. – Sept. 2016
<ul style="list-style-type: none"> <li>Processed payments, issued invoices, staff claims, bank transfers &amp; reconciliations.</li> </ul>	
President, Econ-China Association, <b>Nankai University</b>	Sept. 2016 – Jun. 2017
<ul style="list-style-type: none"> <li>Organized 15+ seminars on economics and invited 10+ professors, attracting 80% of club members.</li> <li>Maintained interactions with alumni and companies like CICC to find internships for club members.</li> </ul>	
Teaching Volunteer, <b>Tianjin Yongji Primary School</b>	Sept. 2015 – Jan. 2016
<ul style="list-style-type: none"> <li>Weekly guided 40+ pupils about math knowledge.</li> </ul>	