

Han Yuan

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EDUCATION & ACADEMIC EXPERIENCE

* Specialization: A series of related courses

Duke-NUS Medical School , Singapore	Aug. 2020 – Jul. 2024
Ph.D. Degree in Biostatistics and Health Data Science	Advisor: Dr. Nan Liu
University of Zurich , Zurich, Switzerland	Jan. – Jun. 2022
Research Scholar, Department of Quantitative Biomedicine	Advisor: Dr. Michael Krauthammer
Harvard University , Boston, United States	Jul. 2019 – Jan. 2020
Research Scholar, Departments of Epidemiology and Biostatistics	Advisor: Dr. Molin Wang
Nankai University , Tianjin, China	Sept. 2015 – Jun. 2019
Double B.S. Degrees in Bio-technology and Applied Mathematics	Ranking: 1st/79, GPA: 3.7/4.0
Data Science Math Skills (Cert. by Duke), Mathematics for Machine Learning* (Cert. by ICL), Machine Learning (Cert. by Duke), Clinical Decision Making using Deep Learning* (Cert. by UG), Economic Theories (Cert. by EUR)	

PUBLICATIONS & SOFTWARE

* Equal contribution

Yuan, H., ... & Liu, N. (2022). [AutoScore-Imbalance: An interpretable machine learning tool for development of clinical scores with rare events data](#). **Journal of Biomedical Informatics**.

Yuan, H.*, Liu, M.* ... & Wu, Y. (2022). [An empirical study of the effect of background data size on the stability of SHapley Additive exPlanations \(SHAP\) for deep learning models](#). **arXiv** (Preprint).

Xie, F., Ning, Y., **Yuan, H.**, ... & Chakraborty, B. (2022). [AutoScore-Survival: Developing interpretable machine learning-based time-to-event scores with right-censored survival data](#). **Journal of Biomedical Informatics**.

Xie, F.*, **Yuan, H.***, ... & Liu, N. (2021). [Deep learning for temporal data representation in electronic health records: A systematic review of challenges and methodologies](#). **Journal of Biomedical Informatics**.

Miao, C., ... **Yuan, H.**, ... & Wang, Z. (2021). [TRIM37 orchestrates renal cell carcinoma progression via histone H2A ubiquitination-dependent manner](#). **Journal of Experimental & Clinical Cancer Research**.

Xie, F., Ning, Y., **Yuan, H.**, ... & Liu, N. (2021). [Package 'AutoScore': An Interpretable Machine Learning-Based Automatic Clinical Score Generator](#). **R Package**. Documentation.

Zhao, Y.*, **Yuan, H.*** & Wu, Y. (2021). [Prediction of Adverse Drug Reaction using Machine Learning and Deep Learning Based on an Imbalanced Electronic Medical Records Dataset](#). **International Conference on Medical and Health Informatics**.

Zhang, J. J., Sun, Z., **Yuan, H.**, & Wang, M. (2020). [Alternatives to the Kaplan-Meier estimator of progression-free survival](#). **The International Journal of Biostatistics**.

Miao, C.*, Yu, A.*, **Yuan, H.***, ... & Wang, Z. (2020). [Effect of Enhanced Recovery After Surgery on Postoperative Recovery and Quality of Life in Patients Undergoing Laparoscopic Partial Nephrectomy](#). **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, University Hospital Zurich	Jan. – Jun. 2022
• Developed several multi-modality models to facilitate medical diagnoses	
Data Analyst Intern, Channing Division of Network Medicine, Brigham Health	Aug. – Dec. 2019
• Compared and selected statistical models on different projects (mainly longitudinal datasets)	
• Debugged algorithm and simplified time and space complexity of algorithm's code on R	
Data Analyst Intern, Division of Macroeconomic Research, Founder Securities	Aug. – Sept. 2017
• Conducted macro-economy analysis using records from Bloomberg and the National Bureau of Statistics	
• Finished 5+ drafts of macroeconomic research reports and 10+ industrial data reviews	
Finance Intern, Jiangsu Branch, Bank of China	Aug. – Sept. 2016
• Processed payments, issued invoices, staff claims, bank transfers & reconciliations.	
President, Econ-China Association, Nankai University	Sept. 2016 – Jun. 2017

- Organized 15+ seminars on economics and invited 10+ professors, attracting 80% of club members
- Maintained interactions with alumni and companies like CICC to find internships for club members

Teaching Volunteer, **Tianjin Yongji Primary School**

Sept. 2015 – Jan. 2016

- Weekly guided 40+ pupils about math knowledge