

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), Python* (Cert. by UMich), PostgreSQL* (Cert. by UMich), Clinical Data Science* (Cert. by CU Boulder), Clinical Decision Making using Deep Learning* (Cert. by UG)	

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. , ... & 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

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
<ul style="list-style-type: none">Developed several multi-modality models to facilitate medical diagnoses	
Data Analyst Intern, Channing Division of Network Medicine, Brigham Health	Aug. – Dec. 2019
<ul style="list-style-type: none">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
<ul style="list-style-type: none">Conducted macro-economy and industry analysis by using R and Excel with records from Bloomberg and the National Bureau of Statistics of several different countries like the US Census BureauFinished 5+ drafts of macroeconomic research reports and 10+ industrial data reviews	
President, Econ-China Association, Nankai University	Sept. 2016 – Jun. 2017
<ul style="list-style-type: none">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