

# Han Yuan

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## EDUCATION & ACADEMIC EXPERIENCE

<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>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 Bio-technology and Applied Mathematics	Ranking: 1st/79, GPA: 3.7/4.0
<b>Imperial College London</b> , Mathematics for Machine Learning (Certificate)	
<b>University of Glasgow</b> , Informed Clinical Decision Making using Deep Learning ( <a href="#">Certificate</a> )	

## 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
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
• Developed several multi-modality models to facilitate medical diagnoses	
Data Analyst Intern, Channing Division of Network Medicine, <b>Brigham Health</b>	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, <b>Founder Securities</b>	Aug. – Sept. 2017
• 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 Bureau	
• Finished 5+ drafts of macroeconomic research reports and 10+ industrial data reviews	
President, Econ-China Association, <b>Nankai University</b>	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