Xing Liu

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EDUCATION

• Imperial College London

London, UK

Doctor of Philosophy; Statistics (CDT in StatML at Imperial and Oxford)

Oct 2020 - Sep 2024

• University of Cambridge

Cambridge, UK

Master of Advanced Study (Part III); Mathematical Statistics; final grade: 96.1% (Pass)

Oct 2019 - Jul 2020

• Imperial College London

London, UK

Bachelor of Science; Mathematics with Statistics; 1st Class Honours (Top 5% in cohort).

Oct 2016 - Jul 2019

- $\circ \ \ \text{Hyman Levy Memorial Prize, 2019 (awarded to one final year student of Mathematics for excellence in Statistics)}.$
- G-Research Ltd Prize, 2018 (awarded to students of Mathematics for academic excellence).
- o Faculty of Natural Sciences Dean's List, 2017, 2018 and 2019.

RESEARCH EXPERIENCE

• Bayesian Probabilistic Numerical Integration with Tree-Based Models

London, UK

H Zhu, X Liu, R Kang, Z Shen, S Flaxman, F-X Briol; accepted by NeurIPS 2020

Dec 2018 - Jun 2020

 $\circ\,$ Proposed a novel Bayesian numerical integration method using Bayesian tree models.

• Predicting Sepsis at Triage

Toronto, Canada

Xing Liu; supervised by Dr Anna Goldenberg and Erik Drysdale.

Jul 2019 - Aug 2019

- Used various machine learning and natural language processing models to detect early signs of Sepsis at medical triage. Data set was provided by the Emergency Department of the SickKids Hospital in Toronto, Canada.
- Built a Python pipeline that can be used to leverage for prediction of Sepsis and other diseases to improve triage.

• Statistical Modelling for Streaming Data in R

London, UK

Undergraduate Research Opportunity Programme; supervised by Dr Din-Houn Lau.

Jun 2018 - Aug 2018

- Studied iterated weighted least-square algorithm and abrupt change-point detection methods using both parametric and non-parametric test statistics. Topics covered the CUSUMSQ charts, Kolmogorov-Smirnov test and Greenwald-Khanna algorithm. Wrote from scratch all R codes used and produced a 36-page report.
- Funded by the Imperial College London Department of Mathematics UROP Bursary.

Internship Experience

• JPMorgan Chase & Co.

London, UK

Off-Cycle Intern in Quantitative Research and AI & Machine Learning Programme

Jul 2020 - Present

• Worked in the agent lending team on discriminant analysis of equities data and liquidity analysis of fixed income.

Extracurricular Activities

• Imperial Mathematics Competition Committee

London, UK

Senior Event Coordinator and Co-Founder

May 2017 - May 2019

• Led a team of 3 to petition UK/EU universities for collaboration; established partnerships with the Maths societies from 11 UK/EU universities within a month. Competition attracted over 200 participants in its debut.

• Imperial College AI Hack Committee

London, UK

Research Engineer

Aug 2018 - Nov 2018

• Worked in a team of six to design questions for the competition. Question concerned the prediction of the property sale price in Brooklyn, New York City. Helped to coordinate the contest on the day.

SKILLS AND COMPETENCIES

- Languages: Chinese Mandarin (Native); English (Professional); French (Basic).
- Programming: R, Python, MATLAB (Proficient); Unix (Intermediate); C++, Fortran (Elementary).