

# 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
  - Funded by the Imperial College President's PhD Scholarship.
  - Alan Turing Enrichment Award (2023)
- **University of Cambridge** Cambridge, UK  
*Master of Advanced Study (Part III); Mathematical Statistics; Grade: 96.1% (Pass)* Oct 2019 – Jul 2020
  - Part III essay: *Approximate Bayesian Computation with Optimal Transport*
- **Imperial College London** London, UK  
*Bachelor of Science; Mathematics with Statistics; 1st Class Honours (Top 5% in cohort).* Oct 2016 – Jul 2019
  - 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).
  - Faculty of Natural Sciences Dean's List, 2017, 2018 and 2019.

## SELECTED PUBLICATIONS

- **X Liu**, A Duncan, A Gandy (2023). *Using Perturbation to Improve Goodness-of-Fit Tests based on Kernelized Stein Discrepancy*. ICML 2023.
- **X Liu**, H Zhu, J-F Ton, G Wynne, A Duncan (2022). *Grassmann Stein Variational Gradient Descent*. AISTATS 2022.

## RESEARCH EXPERIENCE

- **Approximate Bayesian Computation with Optimal Transport** Cambridge, UK  
*Part III Essay; advised by Dr. Sergio Bacallado.* Feb 2020 – May 2020
  - Approximate Bayesian Computation (ABC), Optimal Transport, Maximum Mean Discrepancy, KL-Divergence.
- **Predicting Sepsis at Triage** Toronto, Canada  
*Summer Research Programme; supervised by Dr Anna Goldenberg and Mr Erik Drysdale.* Jul 2019 – Aug 2019
  - Natural Language Processing, BERT, medical triage; in collaboration with the SickKids Hospital, Toronto, Canada.

## INTERNSHIP EXPERIENCE

- **Meta** London, UK  
*Research Scientist Intern* Jun 2022 – Sep 2022
  - Worked on multi-task active learning for improving ads ranking models.
- **JPMorgan Chase & Co.** London, UK  
*Off-Cycle Intern in Quantitative Research and AI & Machine Learning Programme* Jul 2020 – Oct 2020
  - Worked on discriminant analysis of equities data and liquidity analysis of fixed income using Random Forest.

## EXTRACURRICULAR ACTIVITIES

- **Bridges for Enterprise** Cambridge, UK  
*Mentor and Global Analytics and Algorithm Manager* Dec 2020 – Present
  - Led student teams and worked on MLOps (using MLflow and Microsoft Azure) and Natural Language Processing.
- **Imperial Mathematics Competition Committee** London, UK  
*Co-Founder and Senior Event Coordinator* May 2017 – May 2019
  - Led the publicity team and established partnerships with Maths societies from 11 UK universities within a month.

## SKILLS AND COMPETENCIES

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