Curriculum Vitae

Ziye Lin

Master of Mathematics Candidate
Department of Statistics and Actuarial Science
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June 9, 2025

Ziye Lin

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Education

University of Waterloo — Waterloo, ON, Canada
Master of Mathematics, Biostatistics — *08/2025 (Expected)*

- Supervisor: Prof. Changbao Wu
- GPA: 84/100
- Research focus: imputation-based approaches to causal inference
- Core courses: causal inference, probability theory, analysis of survival and longitudinal data
- Award: 2024 W.F. Forbes Entrance Award

University of Waterloo — Waterloo, ON, Canada
Bachelor of Mathematics, Statistics — *08/2023*

- GPA: 89/100
- Core courses: mathematical statistics, linear models, sampling and experimental design
- Award: 2020 President's Scholarship of Distinction

Teaching Experience

Tutorial Leader – STAT 230 (Probability) — 05/2025 – Present
Department of Statistics and Actuarial Science, University of Waterloo — *Waterloo, ON, Canada*

- Deliver five tutorial sessions to approximately 40-50 students
- Clarify concepts and review practice problems
- Interact with students to answer questions and provide support

Guest Lecturer – STAT 231 (Statistics) — 03/2025
Department of Statistics and Actuarial Science, University of Waterloo — *Waterloo, ON, Canada*

- Delivered a guest lecture to a class of approximately 30 students
- Covered Gaussian response models and model diagnostics
- The lecture notes: Notes
- Recorded lecture available upon request

Math Tutor – MATH 237 (Calculus III for Honours Mathematics) — 01/2023 – 04/2023
Mathematics Tutoring Centre, University of Waterloo — *Waterloo, ON, Canada*

- Conducted one-on-one in-person tutoring sessions with students
- Clarified course material and provided strategic hints for assignments

Grader – STAT 330 / 331 / 332 — 09/2024 – Present
Department of Statistics and Actuarial Science, University of Waterloo — *Waterloo, ON, Canada*

- Grade assignments and examinations:
  - STAT 330 (Mathematical Statistics)
  - STAT 331 (Applied Linear Models)
  - STAT 332 (Sampling and Experimental Design)
- Provide constructive feedback to support students' learning

Professional Development

Fundamentals of University Teaching Program (In Progress) 05/2025 – Present
Centre for Teaching Excellence, University of Waterloo *Waterloo, ON, Canada*

- Participating in a professional development program for post-secondary teaching
- Completed three peer-reviewed microteaching sessions with peers and facilitators, focusing on lesson delivery and feedback
- Recognized across Canadian universities as a foundational teaching preparation credential

MATH 900 – University Mathematics Teaching Techniques 01/2025 – 04/2025
Faculty of Mathematics, University of Waterloo *Waterloo, ON, Canada*

- Completed formal training in university-level mathematics instruction
- Studied course design, lecture effectiveness, assessment strategies, and student engagement
- Delivered three peer-reviewed teaching sessions on probability theory and statistical modeling
- Delivered a guest lecture to a live undergraduate class: STAT 231 – Statistics
- Designed an assignment question with marking rubric: Sample Sampling Theory Question
- Authored a formal teaching statement: Teaching Statement
- By completion, qualified to be appointed as a graduate instructor in the Department of Statistics and Actuarial Science for undergraduate courses

Research and Project

Imputation-Based Approaches to Causal Inference (In Progress) 05/2025 – Present
Master's Research Paper, University of Waterloo *Waterloo, ON, Canada*
Supervisor: Prof. Changbao Wu

- Exploring imputation approaches in causal inference
- Reviewing Propensity Scores, Inverse Probability Weighted Estimators, AIPWE
- Conducting simulation and empirical study on relevant imputation methods (in R)
- Comparing performances of imputation-based estimators to non-imputation-based estimators
- Summarizing results in a formal essay to fulfill master's degree requirement

Modeling the Observed Radial Velocity of NGC 7531 Galaxy 07/2023 – 08/2023
STAT 444 (Advanced Regression) Project, University of Waterloo *Waterloo, ON, Canada*

- Modeled the association between the observed radial velocity and the position in the sky from which it is observed for NGC 7531
- Applied ordinary least squares, regularized least squares with ℓ^2-norm penalty, cubic polynomials, and cubic B-splines (in R)
- Assessed model performances by AIC, training error, and estimated mean prediction squared error via cross-validation
- Source dataset: The Elements of Statistical Learning → Data → Galaxy
- Project report and Appendix (Code): Report PDF | Appendix (Code)

Skills and Languages

- Programming: R, Python, SQL, SAS
- Typesetting: LaTeX, R Markdown
- Language: English (fluent); Chinese: Mandarin (native) and Cantonese (native)
- Personal Hobbies: Piano (ABRSM GRADE 8); Swimming; Cooking

References

Changbao Wu
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