

# Curriculum Vitae

**Ziye Lin**

Master of Mathematics Candidate  
Department of Statistics and Actuarial Science  
University of Waterloo  
Waterloo, ON, Canada

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# Ziye Lin

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## EDUCATION

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### University of Waterloo

*Master of Mathematics, Biostatistics*

Waterloo, ON, Canada

08/2025 (*Expected*)

- Supervisor: 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

*Bachelor of Mathematics, Statistics*

Waterloo, ON, Canada

08/2023

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

## TEACHING DOSSIER

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Teaching dossier available [online](#).

## TEACHING EXPERIENCE

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### Tutorial Leader – [STAT 230 \(Probability\)](#)

*Department of Statistics and Actuarial Science, University of Waterloo*

Waterloo, ON, Canada

05/2025 – Present

- Deliver 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 \(Statistics\)](#)

*Department of Statistics and Actuarial Science, University of Waterloo*

Waterloo, ON, Canada

21/03/2025

- Delivered a guest lecture to a class of 28 students
- Covered Gaussian response models and model diagnostics
- View the [lecture notes](#)
- Recorded lecture available upon request

### Grader – Undergraduate Courses

*Department of Statistics and Actuarial Science, University of Waterloo*

Waterloo, ON, Canada

09/2024 – Present

- Provide written feedback to support students' learning
- Grade assignments and exams:
  - [STAT 230 \(Probability\)](#) (09/2024 – 12/2024 and 05/2025 – Present)
  - [STAT 330 \(Mathematical Statistics\)](#) (09/2024 – 04/2025)
  - [STAT 331 \(Applied Linear Models\)](#) (05/2025 – Present)
  - [STAT 332 \(Sampling and Experimental Design\)](#) (01/2025 – 04/2025)

### Math Tutor – [MATH 237 \(Calculus III for Honours Mathematics\)](#)

*Mathematics Tutoring Centre, University of Waterloo*

Waterloo, ON, Canada

01/2023 – 04/2023

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

## PROFESSIONAL DEVELOPMENT

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### **Fundamentals of University Teaching Program (In Progress)**

Waterloo, ON, Canada

*Centre for Teaching Excellence, University of Waterloo*

01/2025 – Present

- Participate in a professional development program for post-secondary teaching
- Complete two peer-reviewed teaching sessions, focusing on lesson delivery and feedback
- Recognized across Canadian universities as a foundational teaching preparation credential

### **MATH 900 – University Mathematics Teaching Techniques**

Waterloo, ON, Canada

*Faculty of Mathematics, University of Waterloo*

01/2025 – 04/2025

- 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
- Authored a formal 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 PROJECTS

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### **Imputation-Based Approaches to Causal Inference (In Progress)**

Waterloo, ON, Canada

*Master's Research Paper, University of Waterloo*

05/2025 – Present

Supervisor: 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**

Waterloo, ON, Canada

*[STAT 444 \(Advanced Regression\) Project](#), University of Waterloo*

07/2023 – 08/2023

- 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  $\ell^2$ -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 \(Code\)](#)

## SKILLS AND LANGUAGES

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- Programming: R, Python, SQL, SAS
- Typesetting:  $\text{\LaTeX}$ , Markdown
- Language: English (fluent); Mandarin (native) and Cantonese (native)
- Personal Hobbies: Piano ([ABRSM](#) GRADE 8), Swimming, Cooking