

# Ziyang Xiong

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## EDUCATION

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### University of Michigan

Ann Arbor, MI

*Bachelor of Data Science*

April 2025

- Coursework: Data Mining and Statistical Learning, Computational Methods in Statistics and Data Science, Data Structures and Algorithms

### Shanghai Jiaotong University

Shanghai, China

*Bachelor of Electronic and Computer Engineering*

August 2025

- GPA: 3.65/4.00

## WORK EXPERIENCE

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### Hubei Communications Services Company

Wuhan, China

*Technical development programmer*

2022.12-2023.02

- Designed a cloud-based fusion platform for the collection and integration of user device fault data
- Automatically analyzed, consolidated, and categorized diverse fault information, making determinations and forward pertinent data to respective departments
- Instituted an automated, real-time data monitoring system for daily streams, generating the daily report

### Shanghai Jiaotong University

Shanghai, China

*TA of VG 100*

2023.05-2023.08

- Assist professor and provide guidance to students as a teaching team including offer review class, set and grade homework.
- Conduct weekly office hours to help students with engineering problems and academic writing.

## PROJECT EXPERIENCE

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### Shanghai Jiaotong University

Shanghai, China

*Scientific epidemic prevention and control decisions based on mobile data*

2022.08-2023.5

- Research on human movement behavior modeling and prediction algorithms, simulating the dynamics propagation of the coronavirus outbreak in Shanghai and developing agent simulation models supporting tens of millions of population.
- Integrated infectious disease transmission models to support different intervention measures, visualizing and in-depth analysis of epidemic outbreaks outcomes.
- Refined the model with mobile data and provided support for large-scale urban scientific epidemic prevention.

### University of Michigan

Ann Arbor, U.S.

*How to use biochemical indicators and socioeconomic predictors to predict depression*

2023.10-present

- Collect and pre-process all kinds of data including population depression, various biochemical indicators (various proteins, hormones), socioeconomic factors (education, income), etc.
- Use various methods, including oversampling, lasso regularization, random forest, to construct a suitable biochemical prediction model of depression.
- Use and compare all kinds of methods, including bootstrap, SVM, Logistic Regression, KNN and so on, to determine the influence of socioeconomic factors on depression.

### University of Michigan

Ann Arbor, U.S.

*Explore the Relationship between the crime rate and green rate*

2023.10-present

- Collect and preprocess crime rates and greenery statistics for cities across the United States, and then filter and combine these two datasets.
- Propose the hypothesis, and then compare the permutation test and t-test by simulation and choose the better test to determine whether to reject the hypothesis.
- Use Markov Chain Monte Carlo and Metropolis-Hastings methods to further estimate the relationship between crime rate and greening rate.

## SKILLS

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*Computer:* Excel, LATEX, Markdown, SQL, C++, C, MATLAB, Python, R, Verilog, Pr

*Languages:* Chinese as mother tongue, fluent English, entry-level German