

Yibing Chen

Seattle, WA | yibingc@uw.edu | (206) 854 0741

Education

Macalester College, Saint Paul, MN
Majors: Statistics and Economics
Minor: Mathematics

Bachelor of Arts Degree
2021 - 2025

University of Washington, Seattle, WA
Biostatistics PhD Program

Doctor of Philosophy
2025 - Expected 2030

Research Dissemination

Chen, T. Power Analysis for Admixture Mapping Studies. Undergraduate Honors Thesis, Macalester College, 2025.

Chen, T. & Grinde, K. (2024). Evaluating the Power of Admixture Mapping: A Literature Review and Simulation Study. Poster presented September 21, 2024 [StatFest](#) at Columbia University, New York.

Ohr, S., McClure, K., **Chen, T.**, Huang, Z. & Grinde, K. "Significance Threshold Estimation for Admixture Mapping." [R package \(STEAM v0.3.0\)](#). To be submitted on Bioconductor by Spring 2025.

Research Experience

Foundation Model for Wearable Data in Cardiovascular Risk Prediction

Fall 2025 - Present

Research Assistant, led by Dr. Ting Ye

- Develop a multimodal foundation model using minute-level wearable data from the All of Us cohort to predict 5-year cardiovascular disease (CVD) risk.
- Design a scalable data pipeline to extract, quality-control, and transform wearable time-series data from BigQuery into model-ready formats.
- Lead self-supervised pretraining and downstream CVD prediction.
- Evaluate model performance on clinical outcomes (e.g., atrial fibrillation, heart failure, stroke).

Tools and skills: BigQuery, All of Us Workbench, Self-Supervised Learning, Large-Scale Data Processing

Honors Project: Power Analysis for Admixture Mapping Studies

Fall 2024 - Summer 2025

Research Assistant, Led by Dr. Kelsey Grinde

- Conduct a comprehensive literature review on admixture mapping (AM), summarizing factors that influence statistical power in admixed populations.
- Develop and test custom functions for AM, using logistic regression to evaluate how disease models and preprocessing assumptions impact AM study outcomes.
- Use high-performance computing resources at the Minnesota Supercomputing Institute (MSI) to compare the power of case-only, case-control, and regression-based AM methods on binary phenotype data.

Tools and skills: High-performance Computing, Power Analysis, Genetic Data Analysis, Simulation Studies

Teaching Experience

Teaching Assistant (BIOST 310)

Sept 2025 - Dec 2025

University of Washington Department of Biostatistics, Seattle, WA

- Grade homework assignments and provide feedback to support student learning.
- Hold weekly 1-hour office hours.
- Manage the course discussion forum by responding to student questions and clarifying lecture content.
- Lead a weekly quiz-review session to reinforce lecture material and provide additional practice.

Teaching Assistant

Jan 2022 - May 2025

Macalester MSCS Department, Saint Paul, MN

- Work with over 200 students in *Statistical Genetics*, *Probability*, *Applied Multivariable Calculus II*, *Statistical Machine Learning*, and *Intro to Statistical Modeling*.
- Grade homework and gather weekly feedback on workload, facilitating curriculum adjustments.
- Guide students in using Mathematica and R for data analysis and visualization, enhancing their technical skills.
- Hold weekly 2-hour office hours to support and advise students on independent projects.

Technical Skills

Languages: English (Fluent), Mandarin (Native Speaker)

Technologies: R, Python, LaTeX, Git/Github, Stata, SQL, Java, JavaScript, MATLAB, Mathematica, Microsoft