# Facheng Yu

Contact Email: fachengy@uw.edu

Website: https://fachengyu.github.io/

Education University of Washington - Seattle, USA

Jun. 2025 - Present

Ph.D. in Statistics (Expected)

Advisors: Zaid Harchaoui, Alex Luedtke

University of Washington - Seattle, USA

Mar. 2025

M.S. in Statistics

Coursework: Statistical Inference, Statistical Learning, Advanced Probability, Special Topic in Advanced Biostatistics, Advanced Regression Methods

Wuhan University - Wuhan, China

Jun. 2023

B.S. in Mathematics and Applied Mathematics

Thesis: Concentration Inequalities with Applications

Coursework: Stochastic Process, Probability, Real Analysis, Functional Analysis,

Mathematical Analysis, Differential Equations, Advanced Algebra

**Preprints** Stochastic Gradients Under Nuisances.

Facheng Yu, Ronak Mehta, Alex Luedtke, Zaid Harchaoui.

Available at arXiv:2508.20326.

Data Integration Using Covariate Summaries from External Sources.

Facheng Yu, Yuqian Zhang. Available at arXiv:2411.15691.

Research Experience Graduate Research Assistant

Jun. 2024 - Present

University of Washington - Seattle, USA Advisors: Zaid Harchaoui, Alex Luedtke Project: Stochastic Gradients Under Nuisances

Undergraduate Research Assistant

May 2023 - Nov. 2024

Renmin University of China - Beijing, China

Advisor: Yuqian Zhang

Project: Data Integration Using Covariate Summaries from External Sources

Undergraduate Research Assistant

Apr. 2021 - Oct. 2022

Wuhan University - Wuhan, China Advisors: Weixing Zhang, Yidong Lou

Project: Improved GNSS-PWV Three-Factor-Threshold Rainfall Forecasting Method

Accepted by Geomatics and Information Science of Wuhan University

Activities Genome Sciences Hackathon

Sep. 2023

Noble Lab, University of Washington - Seattle, USA

Advisors: Gang Li, William Stafford Noble

Project: Matching Cells between Single-Cell Hi-C and RNA-Sequencing Datasets

 Evaluated existing software tools for cross-modality cell matching using HiRES data.

# Online Reading Group

Aug. - Dec. 2022

University of North Carolina at Chapel Hill - Chapel Hill, USA

Advisor: Guanting Chen

Project: Blackwell's Approachability and Online Learning

• Studied classic literature on online learning and Blackwell's approachability and finished a report on Blackwell's approachability and its applications.

#### **Online Summer School**

Jul. - Aug. 2021

University of Cambridge - Cambridge, UK

Advisor: Pietro Liò

Project: Video Summarization with Flexible Multi-Agent Reinforcement Learning

• Trained a convolutional neural network with shared information to generate policies based on explored video frames.

## Online Winter School

Jan. - Feb. 2021

University of Cambridge - Cambridge, UK

Instructor: Guillaume Hennequin

Course: Balanced Network Models of Cortical Circuits

• Studied models of simulating the interactions of the excitatory, the inhibitory, and the external neuron population.

#### Online Summer School

Jun. - Aug. 2020

Yau Mathematical Sciences Center, Tsinghua University - Beijing, China

Instructor: Xiaoming Zhang

Course: Examples and Exercises of Big Data Analysis

• Studied machine learning algorithms with industrial applications.

Talk

Data Integration Using Covariate Summaries from External Sources

• Presented at the UW Causal Reading Group, Dec. 2024.

### **Teaching**

### Teaching Assistant - University of Washington

• STAT 499: Undergraduate Research, Winter 2024.

Grader - University of Washington

• STAT 396: Finite Markov Chains and Monte-Carlo Methods, Spring 2024.

#### Services

Volunteer for American Causal Inference Conference, May 2024. Mentor of American Statistical Association DataFest, Mar. 2024.

#### Awards

Institute for Foundations of Data Science (IFDS) Scholarship, Fall 2024. Third Prize in Asia and Pacific Mathematical Contest in Modeling, 2022. Third Prize in the Chinese Mathematics Competition, 2020, 2021. Excellent Student Scholarship, Wuhan University, 2020, 2021, 2022.

#### Skills

**Programming**: Python, R, C++

Language: English (fluent), Chinese (native)