

Facheng Yu

Contact	Mobile: (206) 677-6512 Email: fachengyu@uw.edu Website: https://fachengyu.github.io/
Education	<div><div>University of Washington - Seattle, USA M.S. in Statistics (Expected) Coursework: Statistical Inference, Statistical Learning, Advanced Probability, Special Topic in Advanced Biostatistics</div><div>Sep. 2023 - Present</div></div> <div><div>Wuhan University - Wuhan, China 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</div><div>Jun. 2023</div></div>
Preprint	Data integration using covariate summaries from external sources. Facheng Yu , Yuqian Zhang. Available at arXiv:2411.15691 .
Research Experience	<div><div>Graduate Research Assistant University of Washington - Seattle, USA Advisor: Zaid Harchaoui, Alex Luedtke Project: Orthogonal Statistical Learning under Stochastic Optimization<ul style="list-style-type: none">Investigating the behavior of stochastic gradient descent (SGD) in the context of semi-parametric losses.</div><div>Jun. 2024 - Present</div></div> <div><div>Undergraduate Research Assistant Renmin University of China - Beijing, China Advisor: Yuqian Zhang Project: Data Integration Using Covariate Summaries from External Sources<ul style="list-style-type: none">Estimated the mean and causal estimands using covariate moments from external sources.Conducted asymptotic inference on the estimators under missing completely at random (MCAR) and missing at random (MAR).</div><div>Apr. 2023 - Present</div></div> <div><div>Undergraduate Research Assistant Wuhan University - Wuhan, China Advisor: Weixing Zhang, Yidong Lou Project: Research on Improved GNSS-PWV Three Factor Threshold Rainfall Forecasting Method <i>Accepted by Geomatics and Information Science of Wuhan University</i><ul style="list-style-type: none">Proposed an improved three-factor monthly threshold method of rain nowcasting based on precipitable water vapor (PWV), PWV increment and rate of PWV increment.Redefined evaluation factors within a unified framework, providing a potential standard for similar model evaluation.</div><div>Apr. 2021 - Oct. 2022</div></div>

Activities	Genome Sciences Hackathon Sep. 2023 Noble Lab, University of Washington - Seattle, USA Advisor: Gang Li, William Stafford Noble Project: Matching Cells between Single-Cell Hi-C and Single-Cell RNA-Sequencing Datasets <ul style="list-style-type: none"> Compared existing software tools developed for matching cells across modalities based on 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Studied machine learning algorithms with industrial applications.
Talk	Data integration using covariate summaries from external sources <ul style="list-style-type: none"> UW Causal Reading Group, Dec. 2024.
Teaching	Teaching Assistant - University of Washington <ul style="list-style-type: none"> STAT 499: Undergraduate Research, Winter 2024.
Services	Volunteer for American Causal Inference Conference, May 2024. Grader of STAT 396: Finite Markov Chains and Monte-Carlo Methods, Spring 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: R, Python, C++ Language: English (fluent), Chinese (native)