Zhaoliang Zhou

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Education

University of Illinois - Chicago, Chicago, IL — *2022-2027*
Doctor of Philosophy in Biostatistics — Cumulative GPA: 3.90/4.0

University of Minnesota - Twin Cities, Minneapolis, MN — *2020-2022*
Master of Science in Statistics — Cumulative GPA: 3.88/4.0

St. Olaf College: Northfield, MN — *2016-2020*
Bachelor of Arts — Cumulative GPA: 3.72/4.0, Major GPA: 3.81/4.0
Major: Economics
Minor: Statistics and Data Science

Skills/Softwares

Softwares: R/RStudio, RShiny, Python, JMP, SAS, SQL, Markdown, GitHub, Mathematica, SPSS, LaTeX, WordPress
Skills: Statistical/Machine learning, deep learning, predictive modeling, Bayesian analysis
Certification: IHD Foundation

Research Experience

Analyst Commodity I (Student Co-Op)
HEOR-RWE Analytics, AbbVie — *September 2023 - May 2024*
- Used SAS and IHD to provide analysis reports for various requests
- Gained experience with claim-type data, database/hospital chargemaster (MarketScan and Optum), and different standard healthcare billing/coding systems such as ICD 9/10, CPT, HCPCS, and DRG codes
- Obtained IHD Foundation Certification

Biostatistics Intern — *June 2023 - August 2023*
Innovative Analytics, Biogen Inc
- Project title: A Bayesian Framework for Manufacturing Process Data Analysis
- Used RShiny to develop web application/dashboard to visualize data from quality and control (eg. Gage Repeatability & Reproducibility)
- Implemented Bayesian mixed-effect model in the RShiny app to analyze Gage R&R data and compared with the results produced using JMP

Research Assistant — *August 2022 - June 2023*
The University of Illinois Cancer Center
Advisor: Zhengjia (Nelson) Chen
- Topic: Estimating maximum tolerated dose (MTD) in phase-I oncology trials with escalation with overdose control (EWOC) and with bridging solutions to link heterogeneous study populations

Health Equity Analytic Intern — *June 2021 - August 2021*
Performance Analytics Team, Bind Benefits Inc
- Participated in the first health equity project which aimed to establish a performance baseline evaluating health services utilization disparities by race and ethnic groups
- Utilized SQL to pull and join tables from the database (Starburst based) to create desired datasets for analysis
- Used Python to create automated tables to demonstrate medical services utilization rates by different races/ethnicities

- Used R to build GLMM models to investigate the effects of race/ethnicity and socioeconomic factor

Biostatistics Intern — Mayo Clinic *May 2019 - August 2019*

Department of Health Science Research, Mayo Clinic

- Collaborated with biostatistics mentors and cardiologists on a cardiovascular project predicting adverse outcomes after Percutaneous Coronary Intervention (PCI)
- Helped to develop a statistical analysis plan to translate investigators' goals into statistical methods
- Wrote R code for data manipulation and cleaning using inclusion and exclusion criteria
- Applied LASSO for variable selection and prediction of major adverse outcomes, and assessed model discrimination and calibration characteristics
- The project resulted in a published paper and was further developed as an online interactive application at the Mayo Clinic for doctors and patients

Center for Interdisciplinary Research (CIR) Fellow *September 2018 - May 2019*

Department of Math, Statistics, and Computer Science, St Olaf College

- Collaborated with a team of students and chemistry professors on the project *Increasing Persistence and Performance in Introductory Chemistry*
- Managed and cleaned the dataset sourced from the Student Information System using R
- Using R, build statistical models such as linear regression to analyze the data
- Discussed model results and future research directions at the weekly meeting with professors
- Based on the results, discussed the potential improvement of introductory Chemistry course design at St. Olaf College

Teaching Experience

Graduate Teaching Assistant | University of Illinois - Chicago *August 2022 - May 2023*

Course: IPHS 404/405

- Grade students' assignments and monitor the discussion board
- Hold office hours to assist students with questions related to SAS and course materials

Graduate Teaching Assistant | University of Minnesota - Twin Cities *February 2021 - May 2022*

Course: STAT 5052, STAT 3022, STAT 3701

- Graded students' assignments and parts of the exams with instructions provided by the professor
- Led in-person lab sessions with prepared materials to help students to advance in R and statistical concepts
- Held online office hours to assist students with questions

Supplemental Instruction (SI) Leader | St. Olaf College *February 2018 - December 2019*

Course: STAT 110, STAT 212, ECON 121

Academic Tutor | St. Olaf College *February 2020 - May 2020*

Course: MATH 242, MSCS 341

Competition Awards

2nd place, InNova Auto Insurance Company Modeling (Kaggle data science competition) *December 2020*

Finalist, MinneMUDAC Fall Student Data Science Challenge *November 2019*

Publications

Singh, Mandeep, et al. "Multimorbidity and Mortality Models to Predict Complications Following Percutaneous Coronary Interventions." Circulation: Cardiovascular Interventions, vol. 15, no. 7, 19 July 2022, https://doi.org/10.1161/circinterventions.121.011540.