

Zhihua (Robert) Wan

robert.wan@emory.edu | [linkedin.com/in/robert-zhihua-wan](https://www.linkedin.com/in/robert-zhihua-wan)

Education

Emory University Atlanta, GA
PhD in Biostatistics August 2023 – Present

Duke University Durham, NC
M.S. in Data Science | GPA: 3.98/4.00 August 2021 – May 2023
Relevant Courses: Real Analysis, Bayesian Statistics, Stochastic Process, Statistical Modeling, Machine Learning

Northwestern University Evanston, IL
B.A. in Statistics and Economics, Cum Laude | GPA: 3.80/4.00 September 2014 – June 2018
Relevant Courses: Statistical Methods, Linear Algebra, Multivariate Calculus, Regression Analysis, Data Science in R

Research Interests

- Machine Learning, High-Dimensional Data Modeling, Entity Linkage, Data Privacy

Research Experience

Duke University Durham, NC
Master's Degree Capstone Project Researcher September 2022 – Present
Project: Anesthesiology Drug Diversion Detection

- Provided machine learning capabilities to a research project at Duke to detect drug diversion in anesthesiology departments; challenges to be resolved include very few known positives and substantial variation in the data
- Investigated work by a previous team to highlight inconsistencies with the stakeholders' assumed state of the project and realigned expectations with stakeholders to set achievable objectives
- Led stakeholder meetings and planned workstreams to ensure deliverables consistently met expectations

Graduate Researcher (Advisor: Prof. Fan Li) May 2022 – Present
Title: "Put PATH onto the Right Path: On the Practice of the Predictive Approach to Heterogeneous Treatment Effects"

- Discovered a major limitation of a method for measuring heterogeneous treatment effects in a high-impact medical journal we had planned to reference, which redirected the research initiative to address the limitation
- Replicated the method using statistical software despite a lack of formulae and mathematical notations in the journal
- Developed Monte Carlo simulations and helped derive the method's mathematical form to quantify its biases

Graduate Researcher (Advisor: Prof. Jerome Reiter) March 2022 – Present
Title: "A Composite Likelihood Approach to Generate Synthetic, Differentially Private Count Data and Conduct Inferences"

- Developed a novel approach to generate synthetic, differentially private count data and to conduct inferences
- Designed a way to construct composite likelihoods for marginal tables using parameters of fitted loglinear models
- Created a Metropolis-Hastings sampling scheme to construct confidence intervals of true counts inferred from synthetic, differentially private count data

Professional Experience

Mastercard Data & Services Arlington, VA
Associate Consulting Manager August 2018 – June 2021

Team Leadership & Project Management

- Led day-to-day operations of 5 concurrent engagements and developed work plans that guaranteed on-time completion of deliverables, efficient allocation of resources, and visibility and guidance from team leadership
- Coordinated teams across time zones and geographies with different priorities to create a seamless workstream that delivered a monthly service offered to 100+ banking clients consistently on time and with high quality
- Mentored and trained 8 junior teammates and allocated assignments based on projects' strategic needs

Professional Collaboration

- Led business review meetings with managers of Fortune 500 clients to review progress of the partnerships, align on strategic priorities, expand scope of the engagements, and garner buy-in from more senior stakeholders
- Led weekly and on-demand meetings with 30 analysts at a Fortune 10 client to advise on methodologies of their analytical projects, help interpret and contextualize results, and provide trainings on advanced analytical topics

Analytical & Technical Skills

- Provided data-driven strategy consulting services to Fortune 500 clients in finance, retail, and CPG, working closely with managers and analysts on clients' data science, marketing, and category management teams
- Analyzed the impact of 50+ business experiments as the lead Consultant for a CPG client to drive evidence-based in-market decisions including new-product introduction, planogram redesign, and inventory reallocation during COVID-19, driving \$15M+ in value with some recommendations implemented nationwide
- Built models using sales and account balance data to predict the impact of closing branches for a top-10 national bank, advising the client's branch consolidation strategies with the potential to avoid revenue loss of up to \$8M
- Built and managed data infrastructures for multiple clients to ensure accurate transformations of raw files of different formats and complexities and to optimize data ingestion into Mastercard's SaaS platform

Select Leadership Experience & Service

AIESEC at Northwestern University

Evanston, IL

VP of Sales and Marketing

October 2014 – December 2017

- Led a team of 12 to achieve 60% growth in sales by leveraging insights from market research with over 200 responses to create a simplified brand image using, simplify the sales funnel, and standardize the sales pitch

Beijing Fourth High School

Beijing, China

Alumnus Mentor

December 2014 – December 2017

- Advised high school students on college application and college life in the US; spoke at alumni panels

Smoke and Mirrors: Northwestern Magic Club

Evanston, IL

Marketing Co-Chair

May 2016 – September 2017

- Doubled fan page subscribers and increased event attendance by conducting coordinated social media marketing campaigns, tailoring postings to target specific student groups, and designing member profile pictures

Local Community Non-Profit

Recife, Brazil

Volunteer

June 2015 – August 2015

- Established online presence for the non-profit, designed fundraising events, and led activities for local children

Awards

- Dean's List, Northwestern University (9 out of 12 quarters)

Skills

Technical: Advanced in R, Python, SQL, Tableau, Excel

Proficient with LaTeX, Stata, SPSS, AWS, Google Analytics

Management: Project management, mentoring, professional collaboration, professional communication

Language: Fluent in Mandarin

Hobbies: Guitar, classical music, Formula 1