

Ziwen (Jasmine) Jia

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EDUCATION

Georgetown University, McCourt School of Public Policy
Master of Science in Data Science for Public Policy

GPA: 3.95

University of Michigan – Ann Arbor
Bachelor of Science in Economics

Minor: Applied Statistics

Award: University Honors

Washington, DC

Aug 2023 - Expected May 2025

Ann Arbor, MI

Sept 2020 – Apr 2023

PROFESSIONAL EXPERIENCE

Mathematica, Inc.

Washington D.C.

Health Data Scientist

May 2024 - Present

- Developed a healthcare provider-payer relationship analytics system using **Python's NetworkX** to analyze 20+million healthcare claims data, enabling identification of key referral patterns and optimization
- Migrated healthcare insurance data from **Snowflake** data warehouse to **AWS Neptune** graph database using OpenCypher queries, enabling complex relationship analysis and reducing query response time by 40%, which supported faster identification of out-of-network referral patterns
- Engineered a **R** package with **Docker** integration to standardize computational model execution on **AWS SageMaker**, reducing processing time by 35% and improving workflow efficiency and version control company-wide
- Developed data pipelines using **SQL** and **Python** to aggregate patient demographic and clinical data (CPT & ICD10 codes) from various sources for Power BI dashboards

Massive Data Institute

Washington D.C.

Research Assistant

August 2024 - Present

- Engineered and merged complex datasets on crop production, migrant workers, and NHL (non-Hodgkin's lymphoma) incidence; applied advanced **GIS** techniques in **R** to visualize glyphosate exposure patterns on county level data in the U.S., supporting data-driven litigation strategies for the Lawyer's Committee.
- Developed predictive models in **Python** using **ensemble methods** to analyze relationships between environmental exposure and health outcomes; performed **hyperparameter tuning** with 5-fold cross-validation to optimize model performance, directly informing prioritization of legal resources and strengthening causal arguments for the litigation strategy.
- Conducted **spatial regression** analysis to assess racial disparities in police stop data in **R**; integrated, cleaned, and geocoded large datasets to conduct empirical research on selective enforcement with Georgetown Law's Criminal Justice Clinic

Georgetown University, McCourt School of Public Policy

Washington D.C.

Data Analytics Research Assistant

August 2023 - August 2024

- Collaborated with the Census Bureau on Robert Wood Johnson Foundation-funded research to analyze Child Tax Credit receipt among racial and ethnic minorities below the Poverty Measures; applied survey-weighted analysis using **STATA** to evaluate the economic equity impact of tax policies
- Analyzed state-level data on the Earned Income Tax Credit (EITC) to identify trends in refundability and state-specific adaptations using **Python** and **R**, providing analysis and data visualization into how different states leverage the EITC to support low-income families and promote economic mobility

American Enterprise Institute

Washington D.C.

Data Analytics Intern - Center on Opportunity and Social Mobility

January 2024 - April 2024

- Update a longitudinal dataset of USDA's SNAP waivers with a focus on data recency and accuracy, employing data validation techniques and automation to track socioeconomic indicators affecting program eligibility
- Employed advanced analytics using **Python** and **STATA** to assist research scholars in investigating persistent poverty, facilitating the publication of influential academic journals and policy reports

Michigan Institute for Data Science

Ann Arbor, MI

Data Science Research Assistant

November 2022 - April 2023

- Conducted a rigorous analysis of wealth disparities due to racial biases, deriving insights into income differentials across racial demographics using Stata's Decomposition Method
- Orchestrated the management of 3.5 million labor market data points using **MySQL**, and engineered **Python** parallelization frameworks, evaluating the fiscal implication of policy shifts on income and wealth matrices

LEADERSHIP

International Student Council

Ann Arbor, MI

Co-leader

September 2021 - April 2023

- Advocated for the interests of international students at the University of Michigan by initiating events such as the "International Career Panel" and "Wellness Week" to cater their specific needs and aspirations
- Led weekly meetings and facilitated robust communication channels between students and faculty

Central Student Government

Ann Arbor, MI

Ex-officio representative

August 2023-April 2024

- Advocated and Drafted legislation in collaboration with CSG members; successfully implemented the passed proposal with the University faculty and staff to enhance student experiences

PROFESSIONAL SKILLS

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|--------------------|----------|---------------------|----------------------|------------|------------------|
| • STATA | • AWS | • R(Quarto, RShiny) | • Microsoft Products | • Tableau | • GIS |
| • Python | • SQL | • MATLAB | • Snowflakes - ETL | • Power BI | • Cypher - Neo4J |
| • Machine Learning | • GitHub | | | | |