

# DATA SCIENCE | ECOLOGICAL ECONOMICS | POLITICAL ECONOMY

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# **Profile**

- Results-focused savvy leader with sound knowledge of economics, data science, and data storytelling.
- Organized, highly self-motivated, and detail-directed problem solver focused on developing ideas and using data to drive achievement.

# Work Experience

#### **U.S. Small Business Administration**

Remote

LEAD DATA SCIENTIST

July 2022 - Present

- · Applied causal and correlational econometric models, such as Difference-in-Difference, to study economic impact of SBA programs.
- Utilized Random Forest and Survival Regression models to identify lower-risk sections of the portfolio that could streamline processing to significantly cut processing time while limiting risk.
- Developed complex, risk-based stratified sampling plans for all SBA Certification programs covering over 50,000 program participants.
- · Led and mentored a team of data scientists, assigning tasks and ensuring high quality and timeliness of deliverables.
- Conceived and managed a research project to forecast new SBA loans each month using machine learning models such as XGBoost that leveraged both SBA data and external data.

### National Institutes of Health (via MSC, Inc.)

Remote

DATA SCIENTIST

Apr 2015 - July 2022

- Working directly with the Institute Director, performed the first causal analysis of a new NIGMS research grant program, leveraging Difference-in-Difference methods and propensity matching to quantify causal impact.
- Retrieved detailed economic data from BLS to analyze the impact of NIH funding on economic development across states, including the impact on employment and small business starts in various science-related industries.
- Built an R package to streamline and automate database querying and commonly performed analyses to save time and allow team members less proficient in coding to perform analyses.

JPMorgan Chase Lewisville, TX

STRATEGIC ANALYTICS BUSINESS ANALYST III

Dec 2013 - Mar 2015

- Developed recommendations for executives and supervisors that were accepted by operating components; recommendations included procedural changes, systems variations, and acceptance of new technology developments.
- Developed and maintained statistical tables and reports with complex formulas and calculations to make recommendations for improvements to promote efficiency and cost savings of over \$10 million.

JPMorgan Chase Fort Worth, TX

SPECIAL RISK CREDIT ANALYST

Sep 2011 - Dec 2013

• Trained new hires and created Job Aides, Workflow Tools, and Processes to reduce error rate from 35% to 4% in one year.

# **Education**

# **University of Texas at Dallas**

Richardson, TX

MASTER OF SCIENCE IN INTERNATIONAL POLITICAL ECONOMY (GPA: 3.9)

2011

 Relevant Coursework: Advanced Regression Analysis, Time Series Analysis, Structural Equations & Multilevel Modeling, Political Economy of Multinational Corporations

#### **University of Texas at Dallas**

Richardson, TX

BACHELOR OF ARTS IN INTERDISCIPLINARY STUDIES (GPA: 3.96, SUMMA CUM LAUDE)

2009

 Relevant Coursework: International Political Economy, Economics for Public Policy, World Resources and Development, Game Theory, The Global Economy

# Skills

**Programming** R, SQL, PowerBI, Tableau, XGBoost, Keras **Statistics** OLS, GLM, VAR, Difference-in-Difference, Forecasting, ARIMA

Languages Native: English, Fluent: Mandarin Chinese, Intermediate: Taiwanese