MIN (MIA) SHI

Teaching Assistant, School of Economic, Political & Policy Sciences at UTD
Cecil H. Green Hall | 800 West Campbell Road, GR 3.314 | Richardson, TX 75080-3021
Min.Shi@utdallas.edu ◇ minshimia@gmail.com
UTD Profile ◇ Personal Profolio

Education

The University of Texas at Dallas **Aug. 2019 – 2024** *(Expected)**
Ph.D. Candidate in Political Science, Major International Relations, Minor Political Institutions and American Politics
GPA: 3.946/4.0

The University of Texas at Dallas **Aug. 2022 – 2024** *(Expected)**
M.S. in Business Analytics *GPA: 4.0/4.0*

The University of Texas at Dallas **Aug. 2021 – 2024** *(Expected)**
M.S. in Social Data Analytics and Research *GPA: 3.946/4.0*

The University of Texas at Dallas **Aug. 2022 – May 2023**
Graduate Certificate in Applied Machine Learning *GPA: 4.0/4.0*

The University of Texas at Dallas **Aug. 2019 – May 2022**
M.A. in Political Science *GPA: 3.917/4.0*

Shandong University **Sept. 2016 – Jun. 2019**
M.L. in International Politics *GPA: 88.78/100*

Daito Bunka University **Sept. 2017 – Aug. 2018**
Exchange Student in Political Science

Shandong University **Sept. 2012 – Jun. 2016**
B.A. in Japanese *GPA: 87.37/100*

Teaching Experience

School of Economic, Political and Policy Sciences, UTD *Teaching Assistant* **August 2019 – Present**
Graduate Teaching Assistant for:
GOVT 2305 American National Government
GOVT 2306 State and Local Government
EPPS 2302 Methods of Quantitative Analysis in the Social and Policy Sciences
PSCI 3301 Political Theory
PSCI 3325 American Public Policy
PSCI 3328 International Relations
PSCI 3350 Comparative Politics
PSCI 4348 Terrorism, PPOL 4396 Topics in Public Policy
PPPE 6302 Conflict in Cyberspace
PPPE 6304 Open-Source Intelligence for Cyber Security and Policy
EPPS 6313 Introduction to Quantitative Methods

Research Experience

School of Economic, Political and Policy Sciences, UTD *Research Assistant* **May 2022 – Present**
↪ Prof. Jessica Hanson-Defusco

- Conduct in-depth research on cross-cultural corruption analysis, utilizing survey data to examine the experiences of college students with corruption and their perceptions of corruption in both the United States (US) and Mexico.
- Supervise undergraduate research assistants to ensure project completion, independent work, efficient collaboration, and adherence to deadlines.
- Collaborated with colleagues to collect original data from 245 WHO-reporting nations to evaluate the effects of the 2014-16 Ebola Crisis on WHO-reporting Nations' policy adaptations and 2020-21 COVID-19 response, performed statistical analytics, wrote comprehensive reports, and submitted findings to relevant journals.

School of Economic, Political and Policy Sciences, UTD *Research Assistant* **May – Aug. 2021**
↪ Prof. Thomas Gray, Prof. Banks Miller

- Conducted data collection of 1291 Supreme Court cases using both manual and web-scripting techniques, ensuring accurate and comprehensive data capture.
- Utilized time-series models to analyze and assess the time gaps among the schedules of the court cases, providing insights into the temporal dynamics of the legal proceedings.

School of Economic, Political and Policy Sciences, UTD *Research Assistant* **May – Aug. 2020**
↪ Prof. Jonas Bunte

- Collaboratively researched the benefit connections among US government officers, senators, representatives, and US firms based on the available newspaper databases.
- Conducted detailed data analysis to detect potential financial and social connections using regression models.

Scholarships

John Forrest Kain Scholarship **2023**

Government and Political Science Scholarship **2022**

Conferences

2024 SPSA Annual Conference — New Orleans, LA **Jan. 10 - 14, 2024**
Navigating the Waves of US-China Decoupling: A Comparative Analysis of Trade and Investment in Technology and Non-Technology Sectors

2023 ISDSA Meeting — Shanghai, China **Jul. 4 - 6, 2023**
China's COVID Lockdown Policy and Trade with US: A Deep Learning Time Series Approach

2022 APSA Annual Meeting & Exhibition — Montreal, Quebec, Canada **Sept., 2022**
Framing 2018 US-China Trade War during the Trump and Biden Eras (Accepted)

2022 ISDSA Meeting — Notre Dame, IN, USA. **May 31 - Jun. 1, 2022**
Modeling US-China Trade Relations: A Time Series Machine Learning Approach Using MNC Stock Data

Publications

Hanson-DeFusco, J., Shi, M., Du, Z. et al. Systems analysis of the effects of the 2014-16 Ebola crisis on WHO-reporting nations' policy adaptations and 2020-21 COVID-19 response: a systematized review. *Global Health* 19, 96 (2023). https://doi.org/10.1186/s12992-023-00997-8/

Luhui Yang, Min Shi. 2023. An Analysis of the Motivation of the Abe Cabinet's Policy Evolution and Adjustment towards China. *Journal of China's Neighboring Diplomacy.* Vol.6, No.2, 43-68.

Luhui Yang, Min Shi. 2019. China Policy Adjustment or Changes by the Abe Administrations and Its Impacts. *Peace and Development.* No.3, pp.66-84.

Work Experiences

Onyx CenterSource *Data Science Student Consultant* **Aug. 2023 – Dec. 2023**
↪ Raju Pillai, Director of Data Engineering, Analytics and Architect

- Took responsibility for data manipulation and model building for 10+ global health and policy analytics projects.
- Directed the data gathering processes, utilizing diverse methods like sampling, surveys, and web scraping.
- Developed robust statistical models, including multi-variable regression, fixed-effect regression, difference-in-difference, and time-series models, to facilitate correlation and causal inference studies.
- Oversaw a team of over five junior research assistants, ensuring smooth collaboration and timely completion.

Lucion Technology Corp., Ltd. *Marketing Data Analyst* **July 2017 – Aug. 2017**
↪ Xiuzhu Zhao, Minister of Technical Support and Cooperation Development

- Served as a Data Analyst Intern responsible for data management, data visualization, and business analysis.
- Improved the efficiency of data extraction by 40% through data optimization in MySQL.
- Employed Microsoft Visio to visualize intricate network structures and aided in product comprehension.
- Produced Business Intelligence (BI) reports, offering insights based on user structures and competitor analysis.

Data Analytic & ML Projects

Forecasting Stock Prices Through NLP Examination of Newspaper Articles **May 2023 - Dec. 2023**

- Developed automated web scraping for 7,000+ WSJ articles, increasing data acquisition efficiency by 30%.
- Employed various vectorizers for WSJ article analysis, such as Tfidf Vectorizer, n-grams Count Vectorizer, etc.
- Utilized Naïve Bayes and Random Forest models, enhancing S&P 500 prediction accuracy by 12%.

Analysis of the Effect of COVID-19 on US Trade and US Firms **May 2023 - Jul. 2023**

- Synthesized data and created fixed-effect regression models to identify correlations and causal mechanisms.
- Developed and Implemented machine learning and deep learning models to conduct counterfactual analysis.
- Presented research at the 2023 Applied Data Science International Conference to 200 professionals, receiving recognition for clarity and actionable insights.

Analytical Insights and Marketing Strategy Guidance for a Food Company **Feb. 2023 - May 2023**

- Handled data cleaning over 1.3 million raw data records using Python, ensuring data quality and accuracy.
- Developed interactive dashboards in Tableau, enhancing data accessibility and supporting business analytics.
- Employed SAS to construct regression and time series models, leading to a 15% increase in forecasting accuracy.

Big Data Risk Analysis and Data Visualization for a Trucking Company **Aug. 2022 - Nov. 2022**

- Processed and analyzed geospatial data with Hadoop, Hive, Impala and Spark, reducing processing time by 40%.
- Developed Tableau visualizations linked to Hadoop and built interactive dashboards for business matrix analysis.
- Conducted linear regression and multivariate analysis, contributing to predictive accuracy by 15%.

Payroll Management System Database Design via MySQL **Jun. 2022 - Aug. 2022**

- Led a group of five in conducting business requirements analysis and designing a payroll management database with MySQL consisting of 13 tables.
- Created stored functions, procedures, and triggers to calculate employees' payroll per two weeks, fill in new employee information, and send PTO reminders automatically.
- Performed extract-transform-load, data cleaning, and query optimization.

Modeling U.S.-China Trade War's Effect on US Firms using ML and Time Series **Jan. 2022 - May 2022**

- A project aimed at exploring how the US-China trade war affects Multinational Corporations (MNCs) through an ML content analysis of policy changes and a time series GARCH modeling approach using stock data.
- Utilized Pandas, NumPy, Matplotlib & Seaborn in data cleaning, visualization, and transformation.
- Leveraged sentiment analysis to explore how the US frame 2018 US-China trade war
- Applied regression analysis in exploring the causal mechanism between trade war and S&P 500 revenues.
- Built machine learning (ML) models in predicting the profound influence of the trade war on US firms.
- Used time-series GRACH models to evaluate MNCs' revenue & volatility quantified via stock data in Stata.
- Presented at 2022 International Society for Data Science and Analytics Conference.

Content Analysis of News Coverage about US-China Trade War **Aug. 2022 - May 2022**

- Led an analysis on how news organizations frame the 2018 US-China trade war during the 2018-2022 period.
- Leveraged machine learning skills such as top modeling and sentiment analysis to explore a collection of over 500 news articles.
- Implemented time-series analysis and chi-squared test in modeling sentiments change tendencies among news coverage.

COVID-19 Worldwide Cases Synchronous Dashboard using Tableau **Dec. 2021 - Jan. 2022**

- Designed a synchronous Tableau dashboard with advanced interactive functions to explore the COVID-19 severity.
- Built a Tableau story to dig into the factors affecting the severity of COVID-19 by country and found out the deep connection between multiple aspects of factors with COVID-19 severity.

Data Visualization and Correlation Analysis with Multiple Tools **Sept. 2021 - Dec. 2021**

- A project aimed at exploring the factors that affect World Happiness Index by country.
- Utilized Python and R in data collection and data cleaning processes.
- Deployed Python, R, R Shiny and Plotly Dash in exploring correlation among variables and visualizing the correlations.

Selected Course Work

Data Science	Data Management	Data Modeling
Deep Learning	Big Data	Predictive Analytics for Data Science
Natural Language Processing	Cloud Computing Fundamentals	Modeling for Business Analytics
Causal Analytics and A/B Testing	Database Fundations for BA	Regression and Multivariate Analysis
Programming for Data Science	Information Management	Applied Data Analytics with Python
ML for Socio-Eco and Geo Data	Data Collection	Applied Regression
Content Analysis using ML	Data Visualization	Introduction to Quantitative Methods
OOP in Python	Digital Consulting Project	Social Science Research Methodology
Data Structure & Algorithm	Practical Practicum Project	Prescriptive Analytics

Technical Skills

Programming	Python, R, SQL, Stata, SAS
Tools	Alteryx, Tableau, Jupyter Notebook, Excel Charts, R Shiny, LaTeX & TeX
Database & Big Data	MySQL, PostgreSQL, Mango DB, Amazon RDS, Hadoop, Sqoop, Hive, Impala, Pig, Spark
Automation	Alteryx, Appian, Accelq, Uipath
Certificates	Graduate Certificate in Applied Machine Learning at UTD, Google Data Analytics, AWS Certified Cloud Practitioner, Alteryx Designer Core Certificate, Appian Certified Associate Developer, ACCELQ Automation Engineer
Languages	English, Chinese, Japanese

Career Goals

I am pursuing a Ph.D. in Political Science, specializing in International Relations with a minor in Political Institutions and American Politics. Additionally, I am a master's student in Social Data Analytics and Research, as well as Business Analytics. My research examines the impact of the global leadership, economic and technological dominance competition between the United States (US) and China, the two world-leading powers, on US multinational corporations (MNCs).

I am dedicated to advancing my academic and professional endeavors to become a skilled political and data scientist. My focus lies in effectively using a wide array of data sources to investigate topics within international political economics, particularly emphasizing the dynamics of US-China relations. I aim to create sophisticated models that shed light on the complex interrelationships among macro and micro variables in politics and economics, specifically regarding the impact on the performance of US multinational corporations. Through leveraging the capabilities of data analytics, my ambition is to derive practical insights that can guide decision-making processes based on data-driven approaches.