MIN (MIA) SHI

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LinkedIn Profile ◇ Github Personal Website

Education

The University of Texas at Dallas **August 2019 – August 2024** *(Expected)**
Ph.D. Candidate in Political Science, Major International Relations, Minor Political Institutions and American Politics *GPA: 3.942/4.0*

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

The University of Texas at Dallas **August 2021 – August 2024** *(Expected)**
M.S. in Social Data Analytics and Research *GPA: 3.942/4.0*

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

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

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

Daito Bunka University **September 2017 – August 2018**
Exchange Student in Political Science

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

Research Experience

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

- Research cross-cultural corruption and perspectives based on a survey of college students' corruption experience and their perceptions about their country-level corruption
- Explored the effects of the 2014-16 Ebola Crisis on WHO-reporting Nations' Systemic Adaptations and 2020-21 COVID-19 Response; Collaborated with my coworkers in generating original data for 245 WHO-reporting nations, conducting statistical analytics, writing reports, and submitting to journals
- Accomplished data cleaning, transformation, and feature extraction for a collection of 1212 cross-country surveys using Python, utilized R in doing correlation and regression analysis

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

- Performed data collection of 1291 supreme court cases using web-scripting
- Utilized time-series models in analyzing time gaps among case's schedules

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

- Collaboratively researched on the benefits connection among U.S. government officers, senators, representatives, and U.S. firms
- Conducted detailed data analysis to detect potential financial and social connections

Conferences

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

2022 APSA Annual Meeting & Exhibition — Montreal, Quebec, Canada **September, 2022**
Framing 2018 U.S.-China Trade War during the Trump and Biden Eras

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

Publications

Yang Luhui, Shi Min. 2020. An Analysis of the Causes of Shinzo Abe's Policy Evolution and Adjustment towards China. *Journal of China's Neighboring Diplomacy.* Vol.7, No.2.

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

Data Analytic & ML Projects

Analysis of the Effect of COVID-19 on US Trade and US Firms **May 2023 - July 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 findings at the 2023 Applied Data Science International Conference

Extensive Analysis of Table Spreads Industry (Conagra Brands Project) **February 2023 - May 2023**

- Researched over 1.3 million records to identify key metrics contributing to the sales of top brands
- Evaluated strengths and weakness of Conagra Brands compared to competitors in each sub-category
- Built Machine Learning and Time Series models to predict future directions for Conagra Brands

Geospatial Truck Fleet Big Data Analytics and Visualization **August 2022 - November 2022**

- Used big data Hadoop ecosystem to process geospatial data ingestion, transformation, and database creation
- Performed data exploration and visualization in Tableau by connecting to Hadoop ecosystem server
- Modeled how factors affect the truck driver risk factor, drew a final report and proposed suggestions on how to lower the probability of large trucks accidents

Payroll Management System Database Design via MySQL **June 2022 - August 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's information, send PTO reminders automatically
- Performed extract-transform-load, data cleaning, and query optimization

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

- A project aimed at exploring how the U.S.-China trade war affects Multinational Corporations (MNCs) through a 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 U.S. frame 2018 U.S.-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 U.S. 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 U.S.-China Trade War **August - May 2022**

- Led an analysis on how news organizations frame the 2018 U.S.-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
- Selected as iPoster and expected to be presented at 2022 APSA Annual Meeting Exhibition

COVID-19 Worldwide Cases Synchronous Dashboard using Tableau **December 2021 - January 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 **September - December 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		Social Science Research Methodology

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

Being equipped with comprehensive data analytics skills using Python, R, Stata, SAS & SQL, familiar with multiple industry analytical visualization tools, e.g., Tableau, Shiny, R Markdown Dashboard, and having abundant experience with statistical research methods, my research primarily centers around the application of machine learning, deep learning, and time-series statistical models to examine the impact of U.S.-China competitive trade relations on U.S. multinational corporations (MNCs) throughout the trade war, the pandemic, and the post-pandemic periods. By leveraging these advanced analytical techniques, I aim to gain insights into the complex dynamics between the two countries and their influence on MNCs. My ultimate career objective is to become a professional data scientist, utilizing my expertise in political science, international relations, and advanced quantitative analytics to inform strategic decision-making.