# Masood Dastan

Data Scientist, Economist
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Driven Data Scientist with a background in economics, mathematics, and statistics. Expertise in causal analysis, data analytics, and deep learning. Passionate about solving complex problems. Strong track record of scholarly contributions and pedagogical excellence in economics and quantitative methods. Committed to continuous learning and contributing to transformative solutions.

## SKILLS

**Languages: Python (Sci-Kit-Learn, Pandas, Statsmodels, etc), SQL, R, SPARK, STATA;**
**Data Visualization: Seaborn, Matplotlib, GGplot2, Tableau, AWS, Web Scraping;**
**Supervised / Unsupervised Machine Learning, Natural Language Processing, Neural Networks;**
**Research: Applied Economics, Econometrics, Time Series Analysis**

## Selected PROJECTS

**Housing Market Analysis | Python, Sklearn**

- Cleaned a dataset with missing values, outliers, and incorrect data types.
- Developed an innovative feature selection function to optimize feature selection process.
- Developed linear regression and shrinkage models (Lasso, Ridge, Elastic Net).
- Implemented a feature selection algorithm (forward selection) to identify impactful variables.
- Achieved significant performance improvement, with models outperforming the benchmark by 75%.

**Reddit Post Classification and Prediction | Python, NLTK, Sklearn**

- Leveraged Reddit's API to scrape over 10,000 posts from two distinct subreddits, namely "Personal Finance" and "Investing."
- Utilized Natural Language Toolkit (NLTK) for data preprocessing, CountVectorizer, TF-IDF Vectorizer, and various classification models from the Sklearn library.
- Conducted an in-depth analysis of the data to predict the subreddit to which each post belongs.
- Developed a successful predictive model that accurately determines the subreddit category of each post.
- Identified the most influential words in the prediction process, providing valuable insights into the data.

**Predicting Credit Card Delinquency | Python, Sklearn, Deep Learning**

- Led a team in developing a sophisticated predictive model for credit card delinquency in the financial sector.
- Spearheaded data cleaning efforts, removing duplicates, handling missing values, dropping irrelevant features, and generating new ones.
- Conducted exploratory data analysis, ensuring data quality.
- Implemented multiple machine learning models, including Gradient Boosting, AdaBoost, SVC, Logistic Regression, Random Forest, and a Deep Neural Network, to predict credit delinquency.

**Investigating the Impact of FOMC Meetings on Stock Market Performance | SpaCy, NLTK, Sklearn, Transfer Learning , Deep Learning**

- Integrated text analysis to uncover key themes and sentiments from FOMC meeting minutes.
- Utilized topic modeling (LDA) to identify significant US economic concerns discussed during FOMC meetings.
- Conducted sentiment analysis using zero-shot text classification for comprehensive assessment of FOMC statements.

- Evaluated five classification models (including RNN and Gradient Boosting) to gauge the impact of FOMC meetings on stock market performance.
- Achieved 57% accuracy and 61% AUC score with the Gradient Boosting Classifier.

## PROFESSIONAL EXPERIENCE

**Data Science Fellow**, General Assembly | Remote | May 2023 – Aug. 2023

- 12-week, 400+ hour training program focusing on the ability to analyze, make sense of, convey data-driven facts from massive data sets, and predict what happens next through predictive modeling and pattern recognition.

**Assistant Professor**, The University of Texas at El Paso | TX, USA | Sep. 2020 - present

- Instructed over a thousand students at both the undergraduate and graduate levels in economics, business analytics, and quantitative method courses.
- Engaged in University and College committees, notably contributing to the College of Business's 2030 strategic plan.

**Visiting Assistant Professor,** Texas A&M International University | TX, USA | Sep. 2019 – Aug. 2020

- Instructed undergraduate levels courses in Microeconomics, Macroeconomics, and Econometrics.

**Graduate Research and Teaching Assistant**, Georgia State University | GA, USA | Sep. 2013 – Aug. 2019

- Assisted Faculty on their research (gathering and cleaning data, preliminary analysis)
- Instructed undergraduate levels courses in Microeconomics, Public Finance, and Econometrics.

## RESEARCH EXPERIENCE

**Publications**

- Dastan, Seyedmasood, and John Gibson. "The effect of corruption on firm investment in the presence of missing data." American Journal of Economics and Sociology 82.1 (2023): 79-93
- Abdoli, Ghahreman, Yazdan Gudarzi Farahani, and Seyedmasood Dastan. "Electricity consumption and economic growth in OPEC countries: a cointegrated panel analysis." OPEC Energy Review 39.1 (2015): 1-16.
- Gudarzi Farahani, Yazdan, and Masood Dastan. "Analysis of Islamic banks' financing and economic growth: a panel cointegration approach." International Journal of Islamic and Middle Eastern Finance and Management 6.2 (2013): 156-172.

**Under Review**

- Understanding the link between firm size, exposure to public officials and firm corruption (Economic Inquiry)

## EDUCATION

**Georgia State University** | Georgia, USA | Aug. 2019
*Ph.D. in Economics*

**University of Tehran** | Tehran, Iran | May 2013
*Master of Arts in Energy Economics*

**University of Tehran** | Tehran, Iran | May 2010
*Bachelor of Arts in Economics*

## PROFESSIONAL CERTIFICATIONS

**Python for Data Science and Machine Learning Bootcamp,** Udemy | Link
**The Ultimate MySQL Bootcamp: Go from SQL Beginner to Expert,** Udemy | Link
**Google Data Analytics,** Coursera | Link