Sijia Fan

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EDUCATION

Cornell University, SC Johnson College of Business, Ithaca, NY — Sep. 2020 - Now
PhD in Applied Economics and Management, **GPA: 4.0**

Cornell University, College of Engineering, ORIE, Ithaca, NY — Sep. 2018 - Dec. 2019
M.Eng., Concentration: Applied Operations Research, **GPA: 3.9**

Skidmore College, Saratoga Springs, NY — Sep. 2014 - May 2018
B.A. in Mathematics; Honors in Economics
Summa Cum Laude, **Major GPA: 4.0**

Thesis: "Stock Market Reactions to Industrial Disasters: Evidence from Incident Firms and Their Competitors"
Honors: 2018 Periclean Scholar Thesis Award (4 out of over 700 graduating seniors); Third Place, 2019 Silent Hoist and Crane Competition; William E. Weiss Memorial Award in Economics (2 out of all Economic major students)

RESEARCH EXPERIENCE

Research Assistant for Professor Qi Ge, Vassar College, NY — Aug. 2019 - Sep. 2019; Jan. 2020 - Aug. 2020
- Coauthored a paper on analyzing the impacts of apologies on stock markets after industrial disasters. Submitted in Nov. 2020, under review.
- Studied the micro-level spatial and temporal distribution of property crimes due to emotional cues and rational incentives. Geocoded the vehicle robberies and thefts data that contain over 126,000 observations in Sao Paulo using Google API and Python, and computed the distance to the stadiums of 456 home games.

The Home Depot, Master of Engineering Project, Cornell University, NY — Dec. 2018 - May 2019
- Used logistic regressions and gradient boosting to predict a product's conversion rate on the website and analyze interrelationship between product enrichment, pricing and sales.
- Cleaned and aggregated more than 50 GB data with Python and R. Developed a user interface using R Shiny to provide a strategic tool to optimize resource allocations.

US Stock Market Portfolio Optimization Project, Cornell University, NY — Jan. 2019 - May 2019
- Provided a quantitative approach of the Black-Litterman Model: incorporated analysts' views from Bloomberg into the historical price data to obtain the posterior returns and perform the portfolio optimization.
- Performed Markowitz Optimization Model of active portfolio management to maximize the returns of a portfolio consisting of the 37 companies listed in SP 500 in IT sector.

World Bank Data Mining Project, Cornell University, NY — Sep. 2018 - Dec. 2018
- Cleaned and consolidated the data of 345 indicators about health nutrition and population statistics across 263 countries from 1960-2016 to support future projects' forecasts for third world countries' debts.
- Predicted country-level average life expectancy with OLS regression, splines, GAMs, boosted tree models and random forest; classified health-status of people across countries using KNN method and SVM techniques.

Undergraduate Economic Thesis, *"Stock Market Reaction to Industrial Disasters"* — Jan. 2018 - May 2018
- Conducted event study methodology to assess the average market value losses of incident firms and their direct competitors following chemical disasters, using market model and Fama and French's three-factor model.
- Performed cross-sectional regression analyses to explain the determinants of the drop in stock prices of firms from 1990 to 2018.

Mathematical/Interdisciplinary Contest in Modeling, US — Feb. 2018
- Resulted in publication, Fan, Sijia, Ran Tao, and Kaifeng Yang. "How Does Climate Change Influence Regional Instability?", *UMAP* (*Undergraduate Mathematics and Its Application*) *Journal* Vol.39 Issue 2, p165-186. 22p.
- Developed a dynamic system that determines a country's stability, considering economic, political, demographical factors and climate impact.
- Received multiple awards: Outstanding Paper Award (33 out of 20,000 entries), INFORMS Award (1 out of 6000 entries), and International COMAP Scholarship Award (top 4 paper with $10,000 scholarship).

TEACHING EXPERIENCE

Teaching Assistant, Dr. Madeleine Udell, *Learning with Big Messy Data* Sep. 2019 - Dec. 2019

Math Tutor and Grader, Skidmore College, NY Sep. 2016 - May 2018

PROFESSIONAL EXPERIENCE

Block Renovation, New York City, US Feb. 2020 - July 2020

Data Analytics

- Automated the internal data collection and flow by scraping and cleaning relevant data from various sources, and creating real-time Tableau dashboards tailored for every team using R and SQL.
- Built a model to predict customers' conversion rate on the website, and worked with the engineering and sales teams to implement it into the system and practice which increased over 50% first conversion rate in 1 month.

Stone Street Group, New York City, US Apr. 2019 - Aug. 2019

Research Associate

- Researched over 15 Chinese companies listed in the U.S. and wrote weekly financial reports on industry overviews, strategy analyses, operation and business models and future challenges and opportunities.

Morgan Stanley, London, UK May 2017 - Aug. 2017

Remote Research Assistant for Chao Li (*Vice President*)

- Analyzed and consolidated financial analyst reports of Australian and Chinese commodity markets, with an emphasis on iron ore and coal, to support portfolio managers' decisions and facilitate FX trading and hedging.

SKILLS & OTHERS

Computer & Programming: R (proficient), Python (proficient), Java, Julia, SQL, MS Office, Bloomberg, STATA, Mathematica, C, C++, HTML, CSS
Languages: Mandarin (native), English (fluent), Spanish(basic)