Xu Duan

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EDUCATION

The George Washington University (#187 Ranking THE worldwide) — Washington, D.C., USA
Master of Science: Applied Finance (GPA: 3.79/4.0) — August 2020 – August 2021

George Mason University (# 201-300 Ranking ARWU worldwide) — Fairfax, VA, USA
Master of Science: Data Analytics Engineering (GPA: 3.73/4.0) — January 2016 - May 2019

Dongbei University of Finance & Economics — Dalian, Liaoning, China
Bachelor of Arts: Accounting — September 2009 - July 2014

WORK EXPERIENCE

FORKAIA
Data Analyst — August 2019 – December 2020

- Extracted big data from different databases using SQL, cleaned and integrated datasets using Python.
- De-duped large data sets prevented data from degradation, and efficiently customized Python packages to ensured data qualities based on different business needs.
- Performed statistical exploratory analysis, built the data landscape that shapes decision making and recommendations which have potential important value for customers.
- Built visualization dashboard in Tableau and demoed the analysis results with senior leadership.

SELECTIVE PROJECTS

Forecasting EUR/USD exchange rate via machine learning

- Extracted data from Bloomberg and cleaned up over multi-million data.
- Designed the predictive forecasting model for the EUR/USD exchange rate using Python.
- Provided investors with short-term predicted EUR/USD exchange rate and visualized the results.

Portfolio Optimization

- Collected historical data for multiple assets from Bloomberg and performed exploratory analysis in MATLAB to obtain the statistical insights for the return of the assets.
- Analyzed the results and provide business insights to advise investors to create a personal risk-return balanced portfolio with mitigates the impact of poor view estimation.
- Integrated the business background and data analysis results and visualized the results in interactive dashboards for business leader to make strategy decisions.

Portfolio volatility forecasting and portfolio's diffusion processing

- Build an optimal weights portfolio in Excel, calculated the portfolio's expected return, standard deviation, skewness, kurtosis, Sharpe Ratio, semi-variance and Sortino Ratio.
- Obtained the 95% and 99% daily value-at-risk and conditional value-at-risk of the portfolio using different methods.
- Employed volatility model in Excel to forecast the stock's daily volatility.
- Utilized Crystal Ball in Excel to model the portfolio's diffusion process using Geometric Brownian Motion.

RELATIVE COURSES

Financial Modeling and Econometrics, Financial Engineering and Derivative Securities, Real Estate Finance and Fixed-Income Security Valuation, Cases in Financial Management and Investment Banking, Investment Analysis and Global Portfolio Management.
Principles of Data Management and Mining, Analytics: Big Data to Information, Applied Statistics and Visualization for Analytics, Decision and Risk Analysis, Applied Predictive Analytics

TECHNICAL AND LANGUAGE SKILLS

Programming Language: Python, MATLAB, SAS, R, SQL, Excel VBA.
BI Tools: Microsoft Office 365, Bloomberg, Wind, Tableau.
Languages: Chinese (Mandarin), English.