Steve Vu

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Summary

- Master of Science in Behavioral and Computational Economics, Reinforcement Learning Specialization, CFA level II, with 4+ years of experience in creating data-driven investment strategies in banking industry
- Hands-on experience with statistical data analysis, regression analysis, data visualization; Knowledge of Machine Learning models
- Proficient in Scripting languages (Python, PyTorch); Statistical languages (R, Stan); Database language (SQL)

Professional Experience

Reason Foundation **Jun 2022 – Present**
Quantitative Analyst Intern *Los Angeles, CA*
- Increase 10% accuracy of simulation modeling for pension funds' 20-year return projections with Bayesian models in R
- Implement Hierarchical Models in Stan to achieve 5% higher precision in risk evaluation than Quadratic Programming
- Automate data quality tests with PostgreSQL and collaborate with engineers to build Web apps for data visualization

Economic Science Institute **Jan 2021 – Aug 2022**
Research Assistant *Orange, CA*
- Designed, analyzed experiments testing a new business of monetizing reserve price information in Ecommerce auctions
- Saved 15% running time of econometric models on bus maintenance operations with the Gurobi Optimizer Solver
- Reduced 30% time in computing large-scale dynamic market equilibria with Approximate Dynamic Programming

Viet Dragon Securities **Oct 2017 – Sep 2020**
Senior Economic Researcher *Southeast Asia*
- Won the 3rd prize of the best economics and investment research teams in 2017-2018, and achieved CFA level 2
- Led an economic team to counsel top 10 hedge funds in portfolio strategies by exploring Time-series and Text data
- Built a database with 109 features and over 5,000 rows of economic indicators by consolidating data streams
- Monetized investment research reports and initiated business partnerships with international financial institutions

FPT Securities **Aug 2015 – Jul 2016**
Corporate Finance Advisor *Southeast Asia*
- Built data-driven valuation models and raised $80 million bonds for the largest Vietnamese industrial zone developer
- Completed 07 state divestment projects by matching with institutional investors via first-price sealed-bid auctions
- Consulted the 2nd largest textiles firm on Corporate Governance Digitaliztion, and stock listings on HOSE exchange

Projects

Long-Term Benchmark Portfolios for Pension Funds **Jun 2022 – Jul 2022**
- Explored 25-year investment returns data and Modeled risk exposure of 210 pension funds by Quadratic Programming
- Gained extra 5% predictive accuracy and quantified forecast uncertainty by constructing a Hierarchical Bayesian model
- Collaborated with front-end developers to build web apps for visualizing risk levels and investment return predictions

Computing Large Market Equilibria in Dynamic Oligopoly Models **May 2022 – Jun 2022**
- Reduced 30% time in computing large-scale dynamic market equilibria with Approximate Dynamic Programming
- Designed Q-learning agents with experience replay to reconfirm the market equilibria in the dynamic environment

Technical Skills

Languages Python, R, SQL, Regex, PyTorch, TensorFlow, Stan, PyMC, Gurobi, HTML, CSS, JavaScript, LaTex
Developer Tools Power BI, Tableau, Github, Visual Studio, R Studio, Microsoft Excel
Others Probabilistic Machine Learning, Bayesian Data Analysis, Causal Inference, Regression Analysis, NLP

Education

Chapman University **Sep 2020 – May 2022**
Master of Science in Behavioral and Computational Economics *Orange, CA*

National Economics University **Sep 2012 – Jan 2016**
Bachelor of Arts in Investment Economics, summa cum laude *Ha Noi, Vietnam*

Certificates

- Chartered Financial Analyst level 2, CFA Institute **Sep 2017 – Sep 2019**
- Reinforcement Learning Specialization, Coursera and University of Alberta **May 2021 – Jul 2021**