

Jasarin Vorawathanabuncha

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Experience

Part-Time VRC Research Consultant

WorldQuant, LLC
8/18 – 7/19

- Created 70+ market-neutral trading strategies (alphas) for US, EU, and Asian equities using proprietary WebSim platform.
- Achieved average Out-of-Sample over In-Sample Sharpe of 1.48 using price-volume, fundamental, and sentiment datasets.

Quantitative Research Intern (full-time offered)

WorldQuant Research
Bangkok Office
5/18 – 8/18

- Low- to mid-frequency US Equity market-neutral alpha research using Python and C++.
- Implemented Kalman Filter, Fast Fourier Transform, Principal Component Analysis, Logistics Regression, and GARCH in Python.
- Developed Python-based alphas' parameter optimizers with stats module and genetic algorithm.
- Gave weekly lectures on alpha-creating techniques to WorldQuant's International Quant Championship 2018 participants.

Teaching Assistant

Chulalongkorn University
8/17 – 12/20

- Mathematical Techniques for Finance (Linear Algebra and Multivariable Calculus).
- Held office hours, prepare and provide detailed solutions to weekly problem sets.

Education

Carnegie Mellon University

MS in Computational Finance
08/19 – 01/20

- 4.16/4.33 QPA.
- Coursework: Investments. Options. Fixed Income. Discrete-Time Finance. Stochastic Calculus I, II. Time-Series Analysis, Real Analysis I. Computational Methods for PDE. Monte-Carlo Methods. Numerical Methods with C++. Data Science I, II. Machine Learning I, II. Putnam Seminar.

Chulalongkorn University

BBA in Banking and Finance
08/15 – 05/19

- 3.98/4.00 GPA. (Rank 1/118 – Gold Medal) .
- Finance major committee, Head Programmer of Rotman simulations, University chorus pianist
- Academic Excellence Award in all four years, Silver Medal in 2017 National Crown Diamond economic competition (Rank: 2/224), 4th place in Thailand 6th Mozart International Competition
- Coursework: Probability. Inferential Statistics. Linear Algebra and Multivariable Calculus. Macroeconomic Theory. Game Theory. Time-Series Econometrics. Micro-econometrics. Derivatives. Credit Modelling. Financial Engineering with MATLAB. Python. VBA.

Mini Projects

Sampling from Empirical Financial Correlation Matrix Densities Using GAN 2/20

- Applied DC-GAN in generating financial correlation matrices for uses in Monte Carlo simulations.
- Found that the over-fitted network can be used to sample from high-dimensional (>60) empirical densities 2.9 times faster than traditional bootstrap sampling.
- Improve the baseline misclassification rate by 17.4 percentage points.

Trading on Implied Risk-Neutral Densities 8/19

- Interpolated SPX's Black-Scholes implied volatilities to estimate the risk-neutral densities of SPY.
- Found densities to exhibit spikes in out-of-the-money ranges and anti-leverage effect at times.
- Proposed potential trading strategies and applications to estimating VaR surfaces.

Sensitivity Analysis and Intuitions on Edible Wedding- Cake Structured Notes 11/18 – 12/18

- Modelled a new financial derivative by adding adaptive pay-offs to Wedding Cake Option.
- Priced the instrument on Hestonian underlying using Monte-Carlo with antithetic variate.
- Developed GUI in MATLAB for computing and visualising prices and the Greeks.
- Offered implications and intuitions on behaviour of the Greeks.

Intra-Day Market Data Scraping 11/18 – 12/18

- Scraped and stored intra-day prices and order books into a MySQL database with Python scripts.
- Maintained Google Cloud instances to automate the process for Chulalongkorn Financial Lab.
- Analyzed data for potential price-volume trading strategies.