YIFAN (EVAN) LI

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EDUCATION

NEW YORK UNIVERSITY New York, NY
The Courant Institute of Mathematical Sciences
MS in Mathematics in Finance (Aug.2019 - Dec.2020)

- ***Coursework:*** OOP and Data Structure in Java, risk evaluation, factor model, SVD&PCA, optimization, algorithmic trading, time series, statistical arbitrage, Reinforcement Learning, machine learning, LSA, Bayesian Linear Regression, LDA&QDA, Boosting & Bagging, Kernel Regression,

SUN YAT-SEN UNIVERSITY Guangzhou, China
BMngmt in Financial Mngmt & BS in Mathematics (Sep.2014 - Jun.2019)

- ***Awards:*** Second Class Scholarship, Individual Scholarship on Social Activities

EXPERIENCE

China Asset Management Co., Ltd. Beijing, China (work from New York)
Machine Learning Engineer Intern (Jun.2020 – Jul.2020)

- Utilized Python and PyTorch to construct generative adversarial network (GAN) to improve traditional Markowitz model by simulating and estimating expected future returns and variance
- Verified model stability by comparison on results when giving multiple input similarities, verified model accuracy by comparing real data with our model estimation and historical data
- Plotted efficient frontiers separately using model estimation and historical data, then quantified the improvements on the model by implementing a backtest on our model estimation

City University of Hong Kong Hong Kong, China
Research Assistant (Jul.2018 - Sep.2018)

- Applied Python to implement a new back-testing platform, according to the characteristics of cryptocurrency data, to support research on efficient factor signals in the cryptocurrency market
- Devised a 1000+ line code of computation formulas with Python for over 100 technical factors, then calculated the factor value of each stock under new dynamic weight method
- Implemented back test on factor data calculated by different stock price adjustment methods and made comparison on the results for testing the impact of adjustment method on back-testing result

PROJECTS

FX Volatility Smile Calibration (Python) New York, NY

- Using USDBRL market data, calibrated the SABR model parameters with Hagan approximation
- Calculated call/put option strikes and volatilities for 5 market conventions: ATM, RR, and BF.

Almgren-Chriss market impact model New York, NY

- Worked with 100GB+ 3-month high frequency Nasdaq trades and quotes tick data of over 1000 tickers to calibrate Almgren market impact model by applying nonlinear regression
- Formulated the Almgren-Chriss optimal execution problem as a stochastic control problem under with alpha and without alpha conditions for furthering research on the impact of alpha
- Derived the HJB equation and solved for the control and value function, and analyzed alpha impact

Make prediction on Mkt Cap and S&P Rating with Machine Learning methods New York, NY

- Grouped the data by market cap and industry, filled in the NaNs with median values in each group
- Utilized correlation matrix, PCA and Elastic Net to eliminate the unimportant factors
- Constructed models with Machine Learning methods: SVM, MLP and Random Forest to predict Market Cap and S&P Rating, made result comparison and comments on model's performances

Enhanced stock pair-trading strategy with cointegration and risk factor correlation New York, NY

- Tested stock-pair cointegration and calibrated OU process for creating trading signals
- Enhanced strategy by risk correlation and archived 85%+ prediction accuracy in a 10-year backtest

COMPUTER SKILLS/OTHER

Programming Languages: Python, Java, C++, SQL **Certificate:** Machine Learning, Algorithms
Other Software/Tools: PyTorch, TensorFlow, Jupyter Notebook, MATLAB, Excel
Languages: Mandarin (native), English (fluent) **GitHub website:** github.com/yifanlee1128