

Qiyu YANG

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EDUCATION

Lehigh University, Bethlehem, PA

Aug. 2021 -- May. 2023

Master of Science in Financial Engineering

GPA: 3.22 / 4.0

- Completed Coursework: Stochastic Calculus, Random Processes & Applications, Machine Learning, Financial Optimization, Optimization, Advanced Investments, Derivatives & Risk Management, Blockchain & Finance Application
- Grader of Game theory, Design of Experiments, Planning & Scheduling in Manufacturing

Sichuan University Jinjiang College (SCUJJ), China

Sep. 2016 -- Jun. 2020

Bachelor of Science in Financial Management

GPA: 3.52 / 4.0

- Dean's List
- Outstanding Graduate

RESEARCH EXPERIENCE

Interpretability of Reinforcement Learning

Jun. 2022 -- Jan. 2023

- Conducted qualitative and quantitative analysis to identify the self-learning prediction of stock price.
- Developed data architecture from top 10 tech companies, preprocessed data cleaning, and transformed inputs.
- Combined the Shapley value with the Q table value to check the impact of each feature.
- Performed ad-hoc analysis model to study the market trends to search for valuable features to improve the training processes. And applied Hypothesis Testing to determine the relationship between market trends and stock price.
- Trained linear or logistic regression to select important features. Beta and P/E ratios are significant in trading scenarios.

RELATED EXPERIENCE

Financial Analyst | Integrity

Jun. 2022 -- Sep. 2022

- Responsible for advising an entrepreneurial company on the valuation of their product department for market analysis and financial analysis and developed a valuation report.
- Facilitated discussion with the management team on the selection of methodologies.
- Screened comparable companies based on multiple criteria, including business descriptions, trading strategies, market capitalization, and environmental friendliness. Predicted future growth rates and discount rates.
- Developed valuation models via comparable company analysis and discounted cash flow (DCF).
- Defined inputs, chose the suited Monte Carlo simulation to estimate, and combined ROA, ROE, and EBITDA margin analysis to evaluate financial performance. Simulated the changes in key inputs by sensitive analysis.

CAPSTONE PROJECTS

CIRP in the Cryptocurrency Market | Morgan Stanley

Fall 2021 -- May. 2022

- Researched the main business of the Cryptocurrency Market. Identified the relationship between inflation trending and Litecoin and Ripple are related. BTC and ETH are not good fluctuation factors for the test.
- Performed the estimation of risk management in cryptocurrencies' portfolios constitutes an essential tool to improve investment decisions and trading strategies.
- Proposed a Value-at-Risk (VaR) and Expected Shortfall (ES) estimation strategy in cryptocurrencies' portfolios.

Falling Knife | MIAC

Fall 2021 -- May. 2022

- Designed and tracked the risk in the stock index futures investment by using the continuous rising and falling characteristics of high-frequency data of stock index futures as a signal.
- Researched and developed time and quantity analysis and computed the average fluctuation of continuous falling and rising is 5. Then used the Copula function to fit the dependency structure.
- Reported both VaR and CVaR are calculated based on the marginal and joint distribution respectively. Developed and implemented risk dashboards, and controlled, monitored, and tracked all risk management activities.

CAMPUS EXPERIENCE

The squad leader of Financial Management

Sep. 2017 -- Jun. 2019

- Undertook the ACCOUNTING CHALLENGE CUP competition and designed a wearable VR App business plan which assisted with market research based on SWOT analysis and risk management. Received recognition from the department.
- Led a team of 120 members from the business department. Concerned about the groups studying and working status, presided over class election meetings twice, and carried out relevant class activities each month. Won the school's excellent class group recognition.

PERSONAL

Programming: Python (Pandas, Numpy, Matplotlib, PyTorch), Tableau, EViews, Microsoft Suite

Languages: English, Chinese (Mandarin)