

MEIJIA CHEN

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EDUCATION

Columbia University in the City of New York — New York City

Sep 2022-Dec 2023

MSc in Operations Research

Coursework: Optimization Models and Methods, Stochastic Models, Simulation, Machine Learning, Deep Learning, Introduction to Financial Engineering, Data Analytics

City University of Hong Kong — Kowloon, Hong Kong

Sep 2018-Jun 2022

BSc in Computational Finance and Financial Technology, GPA: 3.87/4.0 **Minor in Mathematics**, GPA: 4.0/4.0

Coursework: Derivatives Pricing I&II, Stochastic Calculus, Stochastic Processes, Differential Equations, Mathematical Analysis, Statistical Inference, Multi-variable Calculus, Linear Algebra, C++ Programming, Data Structures, Portfolio Management, Corporate Finance, Accounting

Honors: Two Kaggle Silver Model Winners, , Global 11th team in Rotman International Trading Competition, CityU Mainland Student Scholarship Scheme - Full Tuition Scholarship (4 years), CityU Scholarship (2021-2022), Dean's List winner

PUBLICATIONS

the 5th International Conference on Machine Learning and Machine Intelligence (MLMI 2022) - Hangzhou, China **Sep 2022**
Predicting the Stock Market Volatility Based on Deep Learning and Boosting Tree Methods

RESEARCH EXPERIENCE

Stock Trading Based on Principal Component Analysis - Beijing, China

Feb 2021 - Mar 2021

Trading Analyst; Peking University Center for Machine Learning

- Calculated annual yield and Sharpe Ratio in MATLAB; backtested the model on historical data of CSI 300 futures.
- Reduced the dimensionality of the futures data with Principal Component Analysis and achieved trend following.
- Improved the annual yield from 15% to 23.88% and the Sharpe ratio from 98.7% to 208.4%.

INTERNSHIP

Shenwan Hongyuan Securities — Beijing, China

Jul 2021-Apr 2022

CTA Quantitative Researcher, Division of Fixed Income, Currencies and Commodities (FICC)

- Dug up over 30 companies' research reports and studied factors mining, quantitative asset allocation models and combinations of CTA strategies.
- Deduced and ameliorated interday and intraday factors (smart money factor, APM factor, active trading factor).
- Created Python packages to automatize factors generation and selection.
- Examined various filtered signals (RSI, ATR, double-moving average) through the heatmap instructions.
- Reduced the turnover rate and trading fees by adjusting the timing of the signals.
- Proposed algorithms to reduce the time complexities of Python functions and improved the backtest platform.
- Implemented genetic programming algorithm to combine and reconstruct the basic operators, keeping the effectiveness of neutralized factors.

Beam and Go -Singapore

Dec 2020-Feb 2021

Data Analyst for Digital Wallet, Department of Engineering

- Conducted data pre-processing, model training, hyperparameter tuning, evaluation and deployment for over 20000 transaction records of Filipino users.
- Performed NLP research on transaction classification for predictive modeling.

SELECTED PROJECTS

Kaggle Competition: American Express - Default Prediction

June 2022-Aug2022

- Based on the massive user credit card evaluation records, extracted the user's historical time series data and added statistical features
- Trained LightGBM, XGBoost and CatBoost models with different versions of features; through correlation analysis, retained three LightGBMs and one XGBoost files; used the linear weighted average method to merge the four files.
- Ranked top 1.9% team finally.

Rotman International Trading Competition

Feb 2021

- Participated in BP commodities case, algorithmic trading case, and liquidity risk case.
- Developed algorithms in RIT's API to automate trading strategies and reacted to 12 changing market conditions.
- Generated main trading signals; conducted smart order routing, liquidity assessment, and position management. Made rapid judgments on the profitability, subsequent acceptance and execution, or rejection, of each trading offer.

ADDITIONAL

Programming Skills: C++, Python, VBA, SQL, R