Ziyue Yang

ziyue.yang.apply@gmail.com | +44 7783053018 | ziyue-yang.github.io | linkedin.com/in/ziyueyang25/

Msc Financial Technology student with strong Python and SQL skills, seeking a data analysis internship to apply machine learning and statistical modelling in solving real-world business problems.

EDUCATION

MSc Financial Technology, University College London — Sep 2024 – Sep 2025

Core Courses: Advanced Machine Learning in Finance | Database Fundamentals | Algorithmic Trading | Innovation and Strategy in Finance | Data-driven Modelling of Financial Markets | Blockchain Technologies

BSc Financial Mathematics, First Class Honours, University of Liverpool — Sep 2020 – Jul 2024

Core Courses: Statistical Distribution Theory | Linear Statistical Models | Financial Engineering | Risk Management | Numerical Analysis | Micro&Macroeconomics | Econometrics | Stochastic Process and Calculus | Linear Algebra

PROJECT EXPERIENCES

Leveraged Algorithmic Trading Strategies on Treasury ETFs — Mar 2025 – Apr 2025

- Designed and backtested two leveraged algorithmic trading strategies: Dual Moving Average Crossover and Bollinger Bands, based on excess returns of the SPTL ETF over the effective federal funds rate.
- Constructed daily trading signals using Python by applying rolling windows for moving averages and volatility bands; found that the trend-following DMA strategy outperformed with a Sharpe Ratio of 0.97 and Calmar Ratio of 2.17.

Predicting Bank Loan Status and Amount Using Machine Learning — Dec 2024 – Jan 2025

- Performed Exploratory Data Analysis (EDA) on 45,000 loan records to predict loan approval status; trained Decision Tree, Support Vector Machine (SVM), and Artificial Neural Network (ANN) models; tuned hyperparameters and ultimately achieved 92% accuracy using ANN model.
- Built and evaluated predictive models for loan amounts using Ridge Regression, Random Forest, and ANN models; achieved the lowest MSE of 0.0018 with the Random Forest model.

Database-Driven Online Auction System Development — Sep 2024 – Dec 2024

- Collaborated in a team of four to design an ER diagram modelling users, auction items, and bid records with correct multiplicity; normalized the schema to Third Normal Form (3NF) to ensure data integrity.
- Engineered backend systems using PHP and MySQL to support real-time display of over 100 purchase records and auction results, with response time under 1 second.
- Implemented item recommendation based on bidding history and email notifications to track users' auction results, enhancing user engagement and bidding efficiency by 30%.

Stock Return Forecasting in the Chinese Market — Dec 2023 – May 2024

- Developed stock return forecasting models using OLS, LASSO, and Elastic Net, analyzing SSE50 index data from June 2012 to June 2023. Conducted univariate and multivariate regression analyses to evaluate predictor variables. The S/P ratio showed the highest predictive power, achieving an out-of-sample R^2 of 0.85%.
- Implemented forecast combination techniques to enhance predictive accuracy. Combining S/P ratio and MACD predictors resulted in an out-of-sample R^2 of 1.05%, outperforming all single-variable models.

WORK EXPERIENCES

***Customer Service Intern* | Agricultural Bank of China, Zhejiang, China** — Jun 2022 – Aug 2022

- Assessed credit card applications by reviewing default records and rejecting ineligible applicants, thereby strengthening bank's risk management practices.
- Collaborated with the customer manager in processing car loans by organizing key data, including car models, prices, loan amounts, loan terms, and interest rates, increasing loan processing efficiency by 40%.

***Industry Research Intern* | Guo Hai Securities Research Institute, Shanghai, China** — Jan 2022 – May 2022

- Created a 53-page research report on a detailed analysis of a listed dairy giant "Yili" with organizational structure, core product competitiveness, and the macro retail environment based on its 2021 annual report and prospectus.
- Developed comprehensive dairy database exceeding 100MB in Microsoft Excel, including key metrics such as market size, retail volume, and gross profit margin. The organized data was utilized in 7 research reports.

ACHIEVEMENTS

Outstanding Intern, Agricultural Bank of China, Zhejiang Province — Jun 2022 - Aug 2022

Excellent Volunteer Teacher Award, Xi'an Jiaotong Liverpool University — Jun 2021 - Jul 2021

SKILLS/INTERESTS

Software: Python (Proficient) | R (Proficient) | MySQL (Proficient) | MATLAB (Proficient) | Power BI (Beginner)

Languages: Mandarin (Native) | English (C1 – Advanced, CEFR) | Spanish (Basic)

Interests: Photography | Tennis | Yoga | Badminton | Swimming