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教育背景

复旦大学管理学院应用统计硕士 数据科学与商务分析 (全额奖学金) 2022 年 9 月 - 2024 年 6 月

GPA：3.73/4.0 **排名**：3/48 **核心课程**：深度学习与强化学习 (A)；统计计算与最优化 (A)；运筹学 (A)；大数据技术 (A)

厦门大学经济学院金融学本科 金融学国际化试验班 (全英文教学) 2018 年 9 月 - 2022 年 6 月

GPA：3.91/4.0 **排名**：4/142 **荣誉**：优秀毕业生 (10%)；鸿儒奖学金 (2%)；校级三好学生 (5%) 等

核心课程：金融工程 (98)；C 语言 (99)；统计软件 (99)；概率论 (97)；数学分析 (94)；博弈论 (97)；公司金融 (98)；财务会计 (96)

工作经历

艾方资产 量化分析师 2022 年 11 月至今

- **因子开发**：基于分钟频和日频量价、资金流、订单薄、基本面数据，运用行为金融、多元回归、信息熵、Bootstrap 抽样、正态性检验、高斯混合模型等定量方法构造日间和日内因子，50 余个因子 RIC > 5%；重构因子回测接口实现并行提速与高效整理回测结果；参与构建通用算子库，为手工构造因子和遗传算法批量开发和迭代因子提供支持。
- **深度学习**：从零开发深度学习训练框架，支持隔日采样、混频输入、残差训练、扩展损失函数、特征归因与筛选、多重训练与预测等功能；实现带先验信息的树模型与定制损失函数等功能；重构 PyTorch BERT 预训练模型，用于提取金融文本表征。
- **工具文档**：编写爬虫程序跟踪市场表现；搭建知识库文档，介绍框架使用方法和分享编程技术等。

香农投资 量化研究实习生 2022 年 7 月 - 2022 年 11 月

- **财务选股**：基于戴维斯双击、业绩预增或扭亏等思路，结合财报和业绩预告数据构建基本面选股策略，近 10 年回测稳定获得 15%+ 的超额收益。使用 Fama-Macbeth 回归检验高增速因子，输出个股得分和因子收益率，并比较因子的预测能力和稳定性。
- **高频因子**：使用 DolphinDB 数据库及并行计算技术批量构建 36 个基于 5 分钟级成交数据的高频因子。

华泰证券研究所金融工程组 量化研究实习生 2021 年 11 月 - 2022 年 4 月

- **基金研究**：统计长期绩优基金和历年业绩进行配对 t 检验，构建动量和反转策略投资组合，探究权益基金业绩持续性；应用 Brinson 绩效归因模型测算基金的资产配置收益和选股收益；基于 Sharpe 和 Fama 三因子方法测算基金风格和暴露变化。
- **资产配置**：设计养老目标日期基金，在不同投资期限和风险偏好下获得最优权益资产权重的下滑曲线，并利用蒙特卡洛方法模拟组合净值序列，测算实现投资目标和亏损的概率；基于估值和涨跌幅构建再平衡策略，并优化调仓逻辑控制波动和回撤；应用风险平价模型构建稳健型 FOF 组合；基于国际市场指数绘制有效前沿曲线，验证资产组合丰富度可提高社保基金配置效率。

上海商羊资产管理有限公司 量化研究实习生 2020 年 9 月 - 2020 年 12 月

- **择时研究**：对交易数据进行去极值和行业市值中性化等预处理；将“牛熊指标”择时策略应用于指数，10 年年化收益达 15% 且最大回撤低于指数；优化策略的交易信号指标并调整多维时间窗口参数，改进后的策略年化收益率稳定在 20% 左右。

实践项目与领导力

基于 Bert 的中文问答机器人 Post 2023 年 4 月

- 清洗、分词和编码万余条中文问答数据，设计训练目标为正确回答的起始位置预测准确率，对预训练的 Bert 问答模型进行微调，构建给定中文段落能够对相关问题进行回答的模型并部署在网页。

AlphaNet——基于深度学习的量价因子挖掘 Post 2022 年 12 月

- 使用 PyTorch 自定义前向传播，实现类似卷积的特征提取。结合批标准化、池化和全连接层，实现量价数据到收益的自动挖掘。加入多步长的特征提取层，将池化层替换为 GRU 以保留时序信息，调整预测目标为超额收益的方向，并与随机森林作比较。

CNN 人脸表情识别 Post 2022 年 11 月

- 使用 Keras 构建卷积神经网络，对海量人脸图片进行情绪预测；构建调整卷积核大小、池化大小等调参框架，绘制神经网络结构图；使用数据增强技术生成虚拟训练数据以缓解过拟合问题，最终模型在测试集上的准确率达 65%，比基准模型提高 15%。

基于随机森林回归的 Black-Litterman 模型 Post 2021 年 12 月 - 2022 年 5 月

- **策略思路**：基于随机森林回归，以技术指标为特征，对美国两大股债指数未来一个月的收益率进行预测；以收益率预测值和验证集的 R 方作为收益率观点和信心程度，结合 BL 模型进行资产配置，并与均值方差模型和完美预测收益率的 BL 模型进行对比。
- **实证检验**：随机森林回归的预测准确率约为 55%；BL 模型的收益比 MV 模型高约 3%，且对基预测器个数和交易成本不敏感。

综合技能

语言：英语：专业课全英文教学，六级 621，雅思 7；普通话：母语

技能：熟练：Python，Office（二级）；掌握：PyTorch，SQL，Linux，Spark，Tableau，Stata，C，R，VBA

爱好：阅读，效率工具开发，技术写作，德州扑克，游泳，乒乓球

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Educational Background

Fudan University Data Science and Business Analytics Sep. 2022 - Jun. 2024

GPA: 3.73/4.0 **Rank:** 3/48 **Courses:** Deep Learning(A); Statistical Computing(A); Optimization(A); Big Data(A)

Xiamen University International Experimental Class of Finance Sep. 2018 - Jun. 2022

GPA: 3.91/4.0 **Rank:** 4/142 **Honors:** Honored Graduate(10%); Hongru Scholarship(2%); Merit Student(5%)

Courses: Financial Engineering(98); C(99); Statistical Tools(99); Probability(97); Mathematical Analysis(94); Game Theory(97)

Work Experience

iFund Asset Quantitative Analyst Since Nov. 2022

- **Factor Research:** Constructed factors using behavioral finance, information entropy, normality tests techniques based on minute and daily volume, price and fundamental data, with 50 factors' RIC > 5%. Refactored backtesting interface to implement parallel computing and data visualization. Contributed to a generalized operator library for efficient factor mining.
- **Deep Learning:** Developed a DL framework including data sampling, mixed-frequency input, feature attribution, etc. Implemented tree model with prior information and customized loss function. Reconstructed BERT for extracting financial textual representations.
- **Tools & Docs:** Scripted a web crawler to track market performance. Documented factor mining and programming guidelines.

Shannon Investments Quantitative Research Intern Jul. 2022 - Nov. 2022

- **Fundamental Research:** Implemented stock selection strategies using the financial report and notice data, based on Davis double play, high growth rate and turnaround. Achieved 15+% annualized excess return in backtesting 10 years. Constructed a high growth rate factor model using Fama-Macbeth regression. Calculated stock score and factor return series and its ICIR.
- **High-frequency Research:** Learned the use of DolphinDB database. Utilized NumPy and parallel processing technique to construct 36 high-frequency factors based on minute-level transaction data.

Huatai Securities Asset Allocation Team Intern Nov. 2021 - Apr. 2022

- **Fund Research:** Conducted t-test for fund performance and built momentum strategies to verify the unsustainability. Applied Brinson model to attribute return into allocation and selection. Measured fund style drift using Sharpe and Fama methods.
- **Asset Allocation Research:** Implemented Mean-Variance model to generate glide paths for designing target-date fund. Utilized Monte Carlo method to estimate the distribution of return and loss. Built a rebalancing strategy based on value and price. Built a robust FOF using risk parity model. Drew efficient frontiers of several international indices to demonstrate the allocation efficiency.

Shangyang Asset Management Quantitative Research Intern Sep. 2020 - Dec. 2020

- **Timing Strategies Research:** Applied and assessed the "bull & bear indicator" timing strategy to several indices. Improved the annualized return in 10 years to around 15% and controlled the maximum drawdown by substituting the core proxies and parameters.

Projects & Leadership

Chinese Question Answering Model Based on Bert Post Apr. 2023

- Tokenized and encoded Chinese QA pairs. Designed training objectives to predict the accuracy of the starting position for correct answers. Fine-tuned pre-trained BERT QA models, constructed a model that answers related questions given a Chinese paragrap.

AlphaNet: Factor Mining with Deep Learning Post Dec. 2022

- Implemented custom operators for convolution-like feature extraction using PyTorch. Combined batch normalization, pooling and fully connected layers for automatic mining of price/volume data to stock return. Added multiple strides and Gated Recurrent Unit to extract the time series information. Ran excess return classification task and compared to the random forest as a baseline model.

CNN Facial Emotion Recognition Post Nov. 2022

- Built a convolutional neural network to predict facial emotion using Keras and a framework for tuning the hyperparameters. Utilized data augmentation technique to alleviate the overfitting problem. The model achieved an improvement of 15% over the benchmark.

A Black-Litterman Model Based on Random Forest Regression Post Dec. 2021 - May. 2022

- **Model & Strategies:** Implemented the random forest regression with several technical indicators to forecast the returns of two U.S. stock and bond indices. Combined return prediction and the Black-Litterman model to build a portfolio and compared it with the MV model.
- **Results:** Predicting accuracy is higher than 50%, return is 3% higher and the model is insensitive to hyperparameters and transaction cost.

Comprehensive Skills

Languages: English: CET-6: 621 & IELTS: 7; Mandarin: Native

Programming: Skilled: Python, MS Office(Certified Level II); Competent: PyTorch, Keras, SQL, Linux, Spark, Tableau, Stata, C, R, VBA

Hobbies: Reading, Tool development, Technical writing, Texas Hold'em Poker, Swimming, Ping Pong