Jiashu Lou

Phone: (86) 15958910903 | Email: loujiashu001214@163.com

Education Background

09/2019-07/2023 <div align="right">**Shenzhen University (SZU)**</div>

Mainland China University Rankings in 2021: 18th by Times, 33rd by QS, 32nd by US News

- **Degree:** Bachelor of Science in Mathematics and Applied Mathematics & Bachelor of Economics in Finance
- **GPA:** 3.51 | **GPA of Six Semesters:** 3.17, 3.47, 3.57, 3.64, 3.56, 3.83
- **Enrolled in the 2019 Experimental Class of Mathematical Finance Program**, which is comprised of students who achieved outstanding performance in the preliminary English and math aptitude test and were selected from freshmen at the College of Mathematics and Statistics and College of Economics in SZU. With a high standard and specifically designed curriculum, the excellence rate is much lower than other majors.
- **Award:** Outstanding Student Leader Scholarship twice (Top 1%)
- **Core Courses:** Data Structure and Algorithm (A+), Securities Investment (A+), Matlab Programming (A), Mathematical Modeling (A), Numerical Analysis (A), Machine Learning (A)

Internship History

07/2022-09/2022 *Quantitative Researcher,* **Shenzhen Yujin Private Equity Fund Management Co., Ltd.**

- Employed reinforcement learning to develop automated trading strategies, helped Yujin upgrade and invigorate the investment strategies, optimized Yujin's model training and prediction efficiency
- Researched on the feasibility of incremental learning on keeping track of the latest market data
- Integrated LSTM deep learning with traditional Garch model to predict the volatility of futures trading

07/2021-08/2021 *FinTech Intern of Internet Finance Department,* **China Construction Bank Inc.**

- Tracked and calculated the DAU and MAU of CCB's APP *CCB Life* through SQL and conducted data visualization via Python and Excel; participated in troubleshooting and resolving technical issues
- Submitted daily reports to the manager and attended the weekly meetings with the development team

Research Experiences

06/2021-05/2022 *Project Leader,* **Research on Gene Regulation System Based on Group Sparse Optimization**

- Based gene regulation network reasoning on a rarely-considered algorithm, Group Sparse Optimization, using convex and non-convex penalty functions and evaluating their performance; Developed the open-source software Sparse-Optimization-Toolbox that was uploaded to Python and Github
- Authored the English research paper *Application of Sparse Optimization Algorithm in Gene Regulation Network Reasoning* which was submitted and is being examined
- The research project was approved in China College Students' 'Internet+' Innovation and Entrepreneurship Competition at SZU

10/2021-12/2021 *Lead Author,* **Research on Covid-19 Pandemic and Economic Development**

- Found positive correlation between the number of coronavirus hospitalizations and GDP deviations through Arima model and Linear regression, and evaluated the effectiveness of pandemic policies of China and U.S.
- The research paper *Research on Prediction of Covid-19 Pandemic and Economic Impact* was published in the national journal *Modern Business* (IF=0.3)

07/2022-10/2022 *Coding,* **Automatic trading via LSTM self-coding and reinforcement learning**

- Features are extracted using LSTM self-encoders and fed into PPO reinforcement learning to train agents.
- Research papers *A Novel Deep Reinforcement Learning Based Automated Stock Trading System Using Cascaded LSTM Networks* has been submitted to NEUROCOMPUTING (Q2 IF = 5.7) and is under review

02/2022-07/2022 *Lead Author,* **Palm Vein Recognition via Attention Convolutional Neural Network**

- A convolutional neural network is used to fuse attention mechanisms to identify palm veins and a special loss function is introduced to improve the accuracy
- Research paper *Palm Vein Recognition via Multi-task Loss Function and Attention Layer* has been submitted to IEEE ACCESS (Q2 IF = 3.6) and is under minor edit

Modeling Competitions

02/2022 *Team Leader* (*Meritorious Winner, Top 9%),* **2022 COMAP Mathematical Contest In Modeling**

- Used feature selection for bitcoin and gold price data, and integrated classic time series models with technical analysis indicators for dimension expansion
- Developed the Bi-LSTM model based on Tensorflow, introducing the Attention Mechanism for improvement

11/2021 *Team Leader (First Prize, Top 5%),* **Greater Bay Area Financial Modeling Contest**

- Developed LSTM deep neural network with Keras for stock price prediction, and employed order splitting strategy to avoid liquidity risk

06/2021-10/2021 *Team Leader* (*Finalist, Top 14%),* **iFLYTECH Air Quality Evaluation Algorithm Challenge**

- Performed L1-regularized linear regression to predict the results after conducting feature engineering

Extracurricular Activities

09/2019-Present *Monitor,* **2019 Experimental Class of Mathematical Finance Program**

- Held regular class meetings for classmates to voice their opinions and organized extracurricular events for team building; the Class was awarded Excellent Class for three consecutive years

05/2020-05/2021 *Captain,* **Debate Team of College of Mathematics and Statistics, SZU**

- Recruited new members, organized regular training and led members to attend debate contests

Skills and Certificates

- Proficient in English (IELTS: 7.0/6.5, Test Date: May 26, 2022); Native in Mandarin
- Python (Proficient), Linux (Intermediate), R Language (Intermediate), C++ (Intermediate)