Xueyan (Aaron) Shi

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EDUCATION

University of California, San Diego — **San Diego, CA**
Bachelor of Science in Computer Science — *Expected 06/25*
Bachelor of Science in Cognitive Science: Machine Learning and Neural Computation

- **GPA:** 3.89/4.0
- **Relevant Coursework:** Calculus, Linear Algebra, Vector Calculus, Numerical Analysis, Machine Learning, Differential Equation, Advanced Data Structures, Statistics Methods

PROFESSIONAL EXPERIENCE

Icarus Fund LLC. — **New York, NY**
Quantitative Analysis Intern — *06/24 – 08/24*

- Developed and implemented a custom momentum-based portfolio strategy, achieving a 19-fold return over a 10-year period by optimizing basket length and hyperparameters. Employed graph models such as MST, TVP-VAR, and PMFG to uncover dynamic relationships between global ETFs, enhancing portfolio diversification strategies.
- Utilized advanced statistical methods, including ARIMA models, to validate data suitability, ensuring accurate time series analysis and model reliability.
- Performed comprehensive data analysis, including descriptive statistics, stationarity checks, and autocorrelation assessments, to ensure the robustness of financial models. Conducted multiple statistical tests to validate model assumptions, enhancing the predictive accuracy and reliability of investment strategies.

Orient Securities Co., Ltd. — **Shanghai, China**
Quantitative Trading Intern — *06/23 – 08/23*

- Spearheaded the development of a minute-wise prediction model for Convertible Bond No.123181, refining trading strategies by leveraging machine learning and deep learning models, such as LightGBM and LSTM, with best results having a precision of 80% in test datasets.
- Extracted and analysed high-frequency factors from OHLCV datasets using advanced technical indicators and tools like Tune-TA and TA-lib, enhancing the predictive power and accuracy of the trading model.
- Developed and implemented efficient data processing pipelines, optimizing key stages such as data pre-processing, feature detection, and model training. Achieved a 30% reduction in pre-processing time and accelerated model deployment, improving overall project efficiency and effectiveness.

PROJECTS

Franklin Templeton — **San Diego, CA**
Full Stack Developer, CapitaWise — *02/24 – 06/24*

- Developed an AI voice assistant for commercial banks with trained embeddings of GPT-4, aiming to resolve confusions caused by current bank bots with accurate and direct responses.
- Utilized web-crawler and prompt engineering to generate reliable response without hallucination. Integrated text-to-speech feature for better user interaction with chat bot.
- Awarded for FinTech products development, earning the 2nd place winning team of the Franklin Templeton 2024 AI Contest with $7,000 prize.

UCSD CSE — **San Diego, CA**
Full Stack Developer, GarlicNotes — *03/24 – 06/24*

- Led a team of 11 in developing a web journal using Vanilla JS, with a focus on backend development. Successfully implemented data storage in LocalStorage and designed a pop-up editor interface using Quill.JS, enhancing user interaction and functionality.
- Succeeded in all pipelines such as JS Doc generation and code linting, as well as E2E, Unit and Coverage tests. All pipelines are integrated with GitHub action with Fully automated workflows.
- Awarded as group winner in class of CSE 110 for excellent visual appearance and fully functional CI/CD cycle.

Franklin Templeton — **San Diego, CA**
Quantitative Developer, PawPrints — *02/23 – 06/23*

- Pioneered the development of a blockchain-based solution for pet medical data management, contributing to the advancement of decentralized finance (DeFi) applications in the emerging field of pet healthcare.
- Integrated technologies including Polygon, Web3.js, React.js, and MySQL, to create a robust and user-friendly platform that addresses the needs of pet owners, healthcare providers, and insurance companies in the cryptocurrency ecosystem.
- Awarded for outstanding innovation and technical expertise in blockchain development, earning the 1st place winning team of the Franklin Templeton 2023 Blockchain Contest with $15,000 prize.

SKILLS AND INTERESTS

Programming: Java, Python, C/C++, JavaScript, Solidity, CSS, HTML, Bash, SQL, R
Frameworks: React, YOLO, TensorFlow, OpenCV, Rest API, Node, GitHub, GDB/Valgrind, JUnit