YUV BINDAL

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Education

National University of Singapore — Singapore
Bachelors in Computing and Electrical Engineering (Honours), with a Minor in Mathematics — *Aug. 2022 – May 2026*

Work Experience

Software Engineer Intern — Jan. 2025 - Present
Brighthive - Series A staged AI Startup — *Chicago, USA*

- Deployed data retrieval agentic tools to production by developing a ETL pipeline from AWS Redshift creating a visualisation component for the platform driving an increase in annual contract value by **$1.1M USD** in 2 months
- Optimized platform architecture and implemented a **LRU cache** for retrieved datasets in agentic agent workflows, reducing latency and improving operational efficiency by **20%**, enabling faster task execution

Quantitative Developer Intern — Aug. 2024 – Dec. 2024
Synergy Link Capital - Quantitative Trading Firm — *Singapore*

- Developed load & store pipelines using multi-threading to efficiently handle high-frequency data streams with Python, Websockets, Asyncio, & PostgreSQL, with **<15 ms** latency ensuring **100% accuracy** in stored data
- Integrated a logging framework for enhanced monitoring & debugging services, and applied batching to achieve optimization in system performance helping decrease downtime by **3x**

Quantitative Researcher Intern — May 2024 – Aug. 2024
Rhicon Currency Management - Quantitative Trading Firm — *Singapore*

- Engineered a vectorized and **multi-threaded backtesting** framework using OOP principles across multiple assets and instruments to increase runtime speed by **200%**
- Developed a trading portfolio with 3 breakout & reversion strategies using advanced statistical techniques for trading futures in 5 FX pairs & 2 metals outperforming traditional ETFs by 12%

Technical Skills

Languages: Python, Javascript, Typescript, C/C++
Frameworks: React, Next, Node.js, Flask, FastAPI, CSS
Data Science Libraries: Pandas, SciPy/NumPy, Matplotlib, Scikit-learn, Tensorflow, OCR, OpenCV
Online Courses: Deep Learning Specialisation, Stanford CS229: Machine Learning, Coursera: Applied Econometrics

Competitions

3rd Place, HackNYU 2025 | *Python, GraphQL, React.js, FastAPI* — Feb. 2025

- Used GraphQL to fetch data across multiple APIs predicting real-time network congestion on Solana via XGBoost offering a cost effective solution for traders to mitigate high gas fees

Finalist, Citadel APAC Datathon 2024 | *Pandas, Numpy, Matplotlib* — Mar. 2024

- Applied Vector Autoregression (VAR) to analyze bidirectional causality and feedback mechanisms among F&B stocks, U.S. obesity rates, soda consumption, crude oil prices, and other socio-economic factors.

1st Place, NUS Datathon | *Pandas, CatBoost, Tensorflow* — Feb. 2024

- Preprocessed & Engineered features through hypothesis testing, building a CatBoost Regressor to forecast company sales with hyperparameter tuning using K-folds

1st Runner Up, NUS Fintech Summit | *Xrpl-py, FastAPI, Firebase, Scikit-learn, React, Next* — Jan. 2024

- Secured funding by Ripple for deploying a smart-contract based microfinancing application to manage blockchain loan payments and used predictive modeling to classify user loan eligibilites.

Projects

Medical Sensors Dashboard | *Javascript, Next/React.js, Python* — Nov. 2024 – Jan. 2025

- Designed and implemented a multi-threaded Web Workers pool using JavaScript to optimize data processing, reducing processing time by 50%, and enabling real-time analysis of concurrent high-frequency data streams

Full-Stack Women's Safety Mobile App | *Flutter, Firebase, Python, Flask, Tensorflow* — May 2023 – Aug. 2023

- Developed a full-stack app using Flutter and Flask with REST APIs, integrating TensorFlow's ResNet object detection model to classify dangerous objects with 90% accuracy, aimed at enhancing women's safety