Yu-Ming Wang

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Education

Master's degree in Computer Science *June 2026*
Master of Science GPA (3.889/4.00) *New York University, United States*

- Relevant Coursework: Machine Learning, Operating Systems, Algorithms Design and Analysis

Bachelor's degree in Computer Science *June 2022*
Bachelor of Science (Dual Degree) *National Yang-Ming Chiao-Tung University, Taiwan*

- Relevant Coursework: Data Structures and Object-Oriented Programming, Computer Networking

Bachelor's degree in Quantitative Finance *June 2022*
Bachelor of Science in Management *National Tsing-Hua University, Taiwan*

Skills

Programming Languages :	C++(Prefer), Python, Java, Matlab, R, Verilog, SQL
OS, Cloud and DevOps :	Windows, Linux, AWS, Docker, Git
Machine Learning Tools :	Pandas, Numpy, Scikit-learn, Tensorflow, Pytorch
Language Proficiency :	Mandarin (Native), English

Research and Projects Experience

High Frequency Trading Matching Engine Simulation (C++, Linux) *Mar 2025 - Present*
Self project(In Progress)

- Built a high-performance matching engine in C++ based on Liquibook.
- Architecting a multi-threaded market simulation system with asynchronous event queues and socket-based feed ingestion, emulating the full lifecycle of a low-latency HFT pipeline from signal to execution.

Finetuned RAG Systems Engineering (LLM, MLOPs, Docker) *Dec 2024*
Artificial Intelligence Project

- Designed and implemented a complete Retrieval-Augmented Generation (RAG) system, including Extract,transform and load (ETL), Featurization, and Retrieve pipelines.
- Fine-tuned SmolLM-135M using LoRA and Instruct dataset, enabling retrieval-based question answering and personalized model adaptation.

Closed-Loop Anesthesia Control System (Python, ML Tools) *July 2022*
Industry-Academic Cooperation Project with TVG Hospital

- Preprocessed and cleaned 120,000 retrospective anesthetic medical records using Pandas and NumPy, creating a structured, trainable dataset for machine learning applications.
- Developed and implemented three deep learning algorithms tailored to real anesthetic data, enhancing experimental data in this domain.
- Implemented a structured database to support future research applications, reducing data retrieval and analysis time by 70%.

Professional Experience

Teaching Assistant (Financial Technology, Data Analysis) *September 2023 - June 2024*
National Tsing-Hua University *Hsinchu, Taiwan*

- Designed and taught a workshop on applying Pytorch and Tensorflow to financial data, leveraging GPU acceleration for efficient computation and data analysis.