

SHI JIE YU

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Education

New York University

Master's in Computer Science

Sep 2024 – May 2026 (Expected)

New York, NY

National University of Singapore

Bachelor of Science in Business Analytics with Honors (Distinction)

Aug 2020 – May 2024

Singapore

Technical Skills

Languages: Python, SQL, C, C++, JavaScript, Typescript, Solidity, Java

Web Development: React, HTML, CSS, Firebase, Next.js, MongoDB, Chakra UI, Prisma, Amazon Web Service

Machine Learning: Pytorch, Transformers, Datasets, DeepSpeed, Scikit-Learn, Tensorflow, JAX, Vertex AI

Certifications: GCP Certified Professional Machine Learning Engineer

Experience

Tensorplex Labs

Apr 2024 – Aug 2024

AI Engineer

Singapore

- Spearheaded continuous pretraining and finetuning of Llama 3 language models on billions of tokens' worth of web3 corpora using state-of-the-art techniques such as domain adaptation, LoRa, and task arithmetic.
- Conducted experiments on cutting-edge LLM research using LLaMA-Factory and litgpt frameworks; contributed to open-source by implementing Qwen2.5 in litgpt, and adding MMLU-Pro and GSM-Plus to lm-evaluation-harness.
- Led research and implementation of a novel approach to parameter-efficient model merging; authored a research paper on the proposed method, assuming the first author role.

AI Singapore

Mar 2022 – May 2023

Student Researcher

Singapore

- Developed a comprehensive knowledge repository designed to facilitate the indexing, searching, and filtering of key entities and scholarly works focused on trust in AI using React.
- Created an interactive dashboard that provides insightful visualizations of trends related to trust in AI.

Autodesk

May 2022 – Oct 2022

Data Analyst Intern

Singapore

- Designed interactive Looker dashboards for 3 Autodesk product lines (ReCap Desktop, ReCap Viewer, ReCap Pro), yielding actionable business intelligence capable of informing strategic decisions at the director level.
- Engineered, scheduled, and monitored 20+ daily and weekly Big Data ETL workflows on terabyte-scale data with SQL, Jenkins, and Apache Airflow for analytics with Qubole and monitoring with Mixpanel.
- Spearheaded a machine learning project to predict EC2 peak memory usage using ensemble methods (Random Forests, XGBoosts, LightGBM) and deep neural networks, reducing the cloud cost of AWS EC2 deployments by 50%.

Projects

Business Analytics Capstone | *Pandas, Scikit-Learn, Tensorflow*

Spring 2023

- Collaborated with leading digital payments provider to identify fraudulent merchants by training machine learning models (Gradient Boosting, Positive Unlabeled Learning) on spatio-temporal data; achieved above 90% recall on holdout data.

Surf | *AWS (EC2, Lambda), Smart Contract, OpenAI API*

Fall 2022

- Pioneered an AI-driven smart contract auditing platform that autonomously detects and mitigates security risks in smart contracts with LLMs, accelerating smart contract audits from industry-standard several weeks to a few hours.
- **Awards:** champion at Solana Builders League 2022; recipient of \$10,000 grant from NUS Enterprise.

Leadership / Extracurricular

NUS Fintech Society Machine Learning Department

Fall 2023 – Summer 2024

Director

National University of Singapore

- Managed a 60-member machine learning interest group, creating learning and networking opportunities for members via workshops and hands-on projects; managed 10+ ML projects in diverse domains, including NLP, LLMs, and XAI.

WorldQuant BRAIN

Fall 2023 – Summer 2024

Quantitative Research Consultant

WorldQuant

- Placed 12th out of 500 participants in WorldQuant's NUS Alphathon 2023; thereafter, onboarded as a quantitative research consultant to develop over 30 alphas (predictive signals) for the US market via market-neutral strategies.

Additional Information

Languages: English (Native), Chinese (Native) **Interests:** Climbing, Cycling, Piano, Hiking