

Jeng Yang (Jayden) Kong

Singapore PR | +65 9813 2468 | jengyang1307@gmail.com | linkedin.com/in/jengyangkong | [jengyang7.github.io](https://github.com/jengyang7)

SUMMARY

Software Engineer with 3.5 years of experience and a Master's in Data Science, aspiring to transition into AI Engineering. Experienced in fine-tuning and deploying large language models (LLMs) and integrating AI solutions into production systems. Strong foundation in software architecture and a passion for building scalable, intelligent applications that solve real-world problems.

EDUCATION

University of Malaya

Jul 2023 – Jul 2025

Master of Data Science (CGPA: 4.0)

Monash University

Jul 2018 – Jul 2021

Bachelor of Computer Science(Advanced)

PROJECTS

WalletAI: AI-Powered Personal Financial Assistant Web App

Aug 2025 – Jan 2026

[Live Demo](#) | [Source Code](#) | [Side Project](#) | *Next.js, TypeScript, Supabase, Gemini*

- Built a full-stack AI-powered personal finance tracking web application that enables users to query their financial data using natural language, featuring conversational AI insights and dynamic chart generation.
- Implemented Retrieval-Augmented Generation (RAG) by allowing users to upload financial documents and storing them in Supabase vector database with gemini-embedding-001 embeddings, enabling accurate information retrieval from uploaded documents with 95%+ query accuracy.
- Integrated Gemini 2.5 Flash API with function calling capabilities, allowing the AI to dynamically execute database queries, calculate financial metrics, and trigger chart generation based on user intent.
- Designed a scalable PostgreSQL database schema with multi-currency support, budget tracking, and real-time progress monitoring, deployed on Vercel with serverless architecture.

Financial Text Sentiment Analysis Using LLM for Stock Market Prediction

Nov 2024 – July 2025

[Source Code](#) | *Master's Thesis* | *LLM fine-tuning, Stock Prediction*

- Conducted research on applying Large Language Models to financial news sentiment analysis; combined domain-specific sentiment scores with historical OHLCV stock data to investigate whether incorporating sentiment improves next-day stock price prediction accuracy.
- Fine-tuned Large Language Models (Llama 3 8B, Gemma 7B) using QLoRA on the Financial PhraseBank dataset for domain-adapted sentiment classification, achieving 99.3% test accuracy with Llama 3.
- Collected and preprocessed over 160k financial news articles via Polygon.io API and historical OHLCV data for the top 20 US companies by market cap (via yFinance), curating 35k high-quality labeled samples; engineered time-series sentiment features (3-day, 7-day, 10-day rolling averages) to capture evolving market psychology and integrate with stock price sequences.
- Performed hyperparameter tuning (learning rate, batch size, epochs) for LLM fine-tuning using Optuna; developed and evaluated predictive models (LSTM, XGBoost, Random Forest), demonstrating that LSTM leveraging 7-day sentiment features delivered 10.9% RMSE reduction and 4.4% R² improvement on TSLA stock predictions compared to price-only baselines.

PROFESSIONAL EXPERIENCE

Software Engineer

Jul 2023 – Present

Daikin Holdings Singapore

Singapore

- Led a team of 3 engineers in developing a Flutter-based application to visualize building HVAC power consumption data, enabling identification of energy wastage and driving measurable improvements in energy efficiency for commercial facilities.
- Collaborated closely with business teams to translate strategic objectives into scalable, data-driven software solutions, resulting in a 40% increase in revenue through enhanced feature adoption and user value delivery.
- Optimized end-to-end data pipelines, reducing processing time by 25% and significantly improving data loading performance for real-time analytics and visualization dashboards.

- Developed Python scripts to generate 24 months of realistic HVAC operational data in SQLite format, reducing data creation and setup time by 80% and enabling the QC team to perform full end-to-end, edge-case, and quality testing without relying on live production data.

iOS Engineer

FPLE Group

Jul 2021 – Jul 2022

Kuala Lumpur, Malaysia

- Developed and maintained a high-performance eCommerce iOS application using Swift, UIKit, and MVVM architecture, delivering core features including secure user authentication, product catalog browsing, shopping cart management, and seamless order processing.
- Leveraged Combine for reactive programming and asynchronous data handling, enabling efficient REST API integration and real-time updates across views and view models.
- Applied SOLID principles rigorously across the codebase, resulting in faster feature onboarding for new developers, enhanced modularity, and easier scalability for future expansions.
- Designed and implemented reusable UI components and custom views adhering to Apple Human Interface Guidelines, improving cross-device consistency (iPhone & iPad).
- Built reusable UI components and custom views following Apple Human Interface Guidelines for optimized user experience across iPhone and iPad.

TECHNICAL SKILLS

Language: Python, SQL, R, Dart, JavaScript, Swift.

AI & ML: LLMs (Fine-tuning, RAG), NLP (BERT, Transformers), TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy.

App Development: Flutter, iOS (UIKit/SwiftUI), MVVM Architecture.

Tools & Platforms: Git, Jupyter Notebook, VS Code, Xcode, Supabase.