

Ho Kin Tat

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EDUCATION

National University of Singapore

Aug 2022 – May 2026

Bachelor of Computing (Honors) in Computer Science

- Relevant Coursework: Programming Methodology, Discrete Structures, Data Structures, and Algorithms, Introduction to Artificial Intelligence and Machine Learning, Introduction to Quantitative Finance
- Focus Area: AI and Machine Learning

EXPERIENCE

Software Engineer @ OktoShop

Aug 2024 – Present

Startup focusing on nutrition and product information

- Engineered a high-performance AI-powered chatbot API using **FastAPI** and **Python**, integrating **OpenAI's GPT-3.5** for natural language processing to provide detailed nutritional information for over 100,000 products.
- Implemented advanced vector search capabilities with **FAISS** and **Sentence Transformers**, enabling efficient querying of a large product database for specific nutritional criteria.
- Developed a custom vector store initialization process with batched processing, optimizing for speed and memory efficiency when handling extensive nutritional datasets.
- Utilized **SQLAlchemy** for robust database interactions and implemented efficient bulk insert operations for vector data, significantly improving system scalability for rapid nutritional information retrieval.

Software Engineer @ MVP Studio

Jan 2024 – July 2024

Company that develops commercial prototypes

- Develop Minimal Viable Products (MVPs) such as mobile applications, focusing on creating functional, market-ready prototypes.
- Constructed a dashboard interface and reusable UI components in React using material UI
- **Boosted screen navigation efficiency by 15%** through UI/UX optimizations, enhancing user experience.

AI Developer Intern @ Amaris.AI Pte Ltd

Dec 2023 – Jan 2024

Startup that develops AI solutions

- Conducted practical testing of emerging AI models, with an emphasis on their integration into user-focused products, including a **speech-to-text system with speaker diarization capabilities**.
- Collaborated with Data Scientists in the **implementation of advanced AI frameworks** such as Hugging Face Transformers and PyTorch.
- Enhanced AI model performance and efficiency through optimization techniques such as quantization, **reducing model size by 30%** and **speeding up inference by 25%** with minimal impact on accuracy.

Software Engineer @ Any Technology Pte Ltd

May 2023 – Aug 2023

Fintech startup focusing on transaction processing for retail financial services

- Played a key role in maintaining and enhancing the company's website using React, leading to a significant **30% increase in website traffic and user engagement**.
- Handled **critical data using encryption**, which helped **secure a major million-dollar contract deal** with an Indonesian bank.
- Collaborated with the UX team to implement responsive design principles, resulting in a **25% improvement in mobile user retention**.

PROJECTS

GymBuddy | Python, React Native, Javascript, Firebase, Jest (Jul '23)

- Mobile application for gym goers to create and track their workouts using **OpenAI's GPT API**
- Implemented GitHub OAuth to get data from user's repositories

Offun | Python, Java, PostgreSQL

- Developed a **Facebook-inspired web application** for office personnel to post and communicate for a hackathon

Hangar Telegram Bot | Python

- Developing a hotdesking telegram bot for NUS enterprise

TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, Go

Frameworks: React, Node.js

Developer Tools: Vim, Google Cloud Platform, VS Code, Jupyter Notebook, PyCharm, IntelliJ, Linux

Libraries: Pandas, NumPy, PyTorch, Matplotlib

Certifications: Orbital - Apollo, Udemy - Python Zero to Hero