

# PANG, Zi Yang

+852 95799468 | [zytang@connect.ust.hk](mailto:zytang@connect.ust.hk) | [linkedin.com/in/zi-yang-pang/](https://www.linkedin.com/in/zi-yang-pang/) | <https://portfolio-zi-yangs-projects-80f09863.vercel.app/>

## EDUCATION

**The Hong Kong University of Science and Technology (HKUST)** **Hong Kong, Sep 2023 – June 2027**

**BEng Computer Science + Extended Major in Artificial Intelligence + Minor in Business – First Class Honours (Expected)**

- **CGPA:** 3.961/4.3 | ~ Top 1% of HKUST Undergraduates | 4x Dean's List | HKUST Full Scholarship Admission Holder
- **Courses:** Design and Analysis of Algorithms, Object-Oriented Programming & Data Structures, Database Management Systems

**Methodist College Kuala Lumpur** **Malaysia, Jan 2022 – June 2023**

- Awards: 4A\* | Top in Malaysia in A-Levels Mathematics | Ranked 1st in Computer Science and Mathematics within the cohort

## PROFESSIONAL EXPERIENCE

**Zonic Tech – Full-Stack AI Engineer Intern** **Hong Kong, June 2025 – Present**

- Engineered an AI-powered video editing system that integrates OpenAI's *Large Language Model (LLM)* and *Retrieval-Augmented Generation* with *Redis* and *Upstash Vector* for dynamic data retrieval, leveraging *LangChain* to create an agentic AI workflow that helps users automate the video editing experience and deliver personalized results, enhancing user efficiency and engagement.
- Partnered with the CEO to deliver an engaging pitch to potential enterprise clients and investors, showcasing the company's groundbreaking video understanding model and its innovative applications in AI video editing, resulting in enthusiastic feedback.
- Optimized the parameters passed to *PySceneDetect*'s detect function, achieving a 56% increase in scene detection accuracy.
- Built a custom AI state management system using nested *React* context architecture to replace Vercel's *AI SDK RSC* in the company's codebase, achieving approximately 60% faster client-side updates by shifting state handling to the client-side, while optimizing server synchronization with *Redis* via debouncing.

**Comptify Analytics – Analyst Programmer Intern** **Hong Kong, June 2024 – Aug 2024**

- Spearheaded the development of an *SMTP*-based email verification tool using *Python* that identified 60% of invalid email addresses from the online-collected contact list, allowing the company to focus marketing efforts on the remaining 40% of potential clients.
- Engineered a full-stack director remuneration analytics platform that leverages market data to analyze compensation trends and deliver data-driven recommendations, empowering over 1,000 existing multinational enterprise clients to access executive pay insights and optimize their pay strategies, generating average fees of USD2,300 each, using *.NET*, *MySQL*, *jQuery*, and *Bootstrap*.

**Zonic Tech – Frontend Developer Intern** **Hong Kong, Dec 2023 – Jan 2024**

- Revamped the user interface using *React.js*, enhancing user experience through an intuitive design and *Material UI* components.

## EXTRA-CURRICULARS & LEADERSHIP EXPERIENCE

**Hong Kong Malaysian Student Association – Lead Webmaster** **Hong Kong, Jan 2025 – Present**

- Led a 5-developer team to design and deploy an intuitive events page to showcase the organization's annual events, significantly streamlining information access and enhancing user understanding of organizational initiatives, utilizing *Next.js*.
- Reviewed and debugged *Next.js* code authored by webmasters, managing *Git* workflows for clean merges and stable deployments.

**HKUST Computer Science Department – Undergraduate Teaching Assistant** **Hong Kong, Jan 2025 – May 2025**

- Provided guidance on *C++* syntax and programming logic to 510 students in the Programming with *C++* course, while assisting them in comprehending core computer science concepts, including pointers, object-oriented programming, and data structures.

**Southeast Asia Student Association – Internal Vice President** **Hong Kong, Mar 2024 – Mar 2025**

- Led the coordination with the university administration to host a pre-university arrival program that engaged 60 incoming students.

## PROJECT EXPERIENCE

**MatesMarket (HKUST online marketplace) [[www.matesmarket.online](http://www.matesmarket.online)] – Founder & Lead Backend Engineer**

- Developed and deployed the backend from the ground up with *Flask* on *Azure*, designing a *REST API* architecture that incorporates modularization and enhances maintainability through the implementation of the *Model-View-Controller (MVC)* design pattern.
- Utilized the *Gmail API* with *Python* to automatically send emails to sellers when users express interest in their product.

**Campus food delivery mobile application for university students – Backend Engineer**

- Utilized *Supabase* for hosting the *PostgreSQL* database and *Firebase* for user authentication and for hosting the *NoSQL* database.
- Engineered a scalable *REST API* backend with *Flask*, performing thorough testing using *Postman* to ensure optimal functionality.

## SKILLS & INTERESTS

### • Technical:

- Languages & Frameworks – Python, C++, SQL, JavaScript, HTML/CSS, Flask, PostgreSQL, SQLite, Next.js, React.js
- Developer Tools & Platforms – Firebase, Supabase, Postman, Git

- **Languages:** English (Native), Mandarin (Fluent), Cantonese (Fluent), Malay (Fluent), Hakka (Basic)