Samuel Lee

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Education

The Hong Kong Polytechnic University (Sep 2025 - Present)

- Bachelor of Engineering (Honours) in Information and AI Engineering (Expected 2029)
  (Part of the BEng(Hons)/BSc(Hons) Scheme in Computing)
- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Software Engineering, Database Systems

Experience

Software Engineering Intern (Winter 2025)

Siuroma Kids Limited (Seed-stage, <10 employees)

- **Avatar Creator**
  - Led development of React/TypeScript avatar creator used by 100+ students to design custom avatars, replacing physical paper avatar creation
  - Managed pull-request merges and releases as de-facto integration lead for 3-developer team
  - Architected drag-and-drop studio with real-time preview, responsive canvas, and smart positioning logic
- **Admin Panel**
  - Co-developed 6-tab admin dashboard managing enrollment, scheduling, and requests for 100+ student roster
  - Included tools such as a custom PDF generator and a timetable manager, improving student management efficiency by over 90%
  - Established Git workflow and code review standards that reduced integration bugs by 40%
- Tech Stack: React, TypeScript, Next.js, Canvas API, Firebase, Tailwind CSS, Git

Technical Projects

Handwriting Classification CNN (Aug 2025)

Python, TensorFlow, Keras, OpenCV, scikit-learn

- Developed a convolutional neural network to classify handwritten family names
- Implemented a full ML pipeline with OpenCV data preprocessing and TensorFlow/Keras model training

Console AI Chat Application (Aug 2025)

Node.js, JavaScript, REST APIs

- Built a terminal-based AI client using OpenRouter API to access multiple AI models
- Engineered HTTP request handling and JSON response parsing for conversation management

Portfolio Website (Sep 2025)

React, TypeScript, Tailwind CSS, Vite, Netlify

- Built a production-ready portfolio website using React/TypeScript and Tailwind CSS, deployed on Netlify

Skills & Technologies

- **Frontend Development:** React, TypeScript, Tailwind CSS, Vite, Netlify
- **AI/ML:** Python, TensorFlow, Keras, OpenCV, scikit-learn
- **Tools & Platforms:** Git, Figma, Arduino, VEXcode, Node.js

Leadership & Activities

Team Member, Mini-ROV Competition (Oct 2025)

The Hong Kong Polytechnic University

- Programmed control logic for a 3-thruster ROV using an Arduino Nano for underwater navigation
- Engineered physical assembly with wiring, buoyancy control, and waterproofing
- Collaborated within a 6-person team to build an operational underwater robot

Class Representative (Sep 2025 - May 2026)

The Hong Kong Polytechnic University

- Serving as one of two primary liaisons between a cohort of 67 students and faculty for the Information and AI Engineering program.
- Collaborating with the co-representative to consolidate student feedback and address academic concerns, ensuring comprehensive coverage of student issues.

Team Member, VEX Robotics Competitions (Aug 2023 - Jun 2024)

Christian Alliance International School

- Designed, built, and programmed competition robots using VEXcode for autonomous control
- Troubleshot hardware/software integration under time constraints in a team setting