

Ian Pang

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EDUCATION

Purdue University

Bachelor of Science in Computer Science, Bachelor of Science in Mathematics

Present – 2028

West Lafayette, IN

- Relevant Coursework: Java, Discrete Math, C Programming, Computer Architecture, Data Structures & Algorithms

EXPERIENCE

Microfluidics Researcher

Microfluidics for Manipulation of Biologics, Zhan Lab, Purdue University

May 2025 – Present

West Lafayette, IN

- Developed a real-time embryo detection pipeline using OpenCV to isolate single embryos from high-speed microfluidic video streams
- Trained a ResNet-based convolutional neural network to classify embryo developmental stages, optimizing for fast, binary (yes/no) inference to enable downstream sorting

Software Engineer Intern

Suga International Holdings Limited

June 2025 – August 2025

Hong Kong SAR

- Led R&D for an audio mixer product and helped develop core DSP features
- Designed and deployed a lightweight MicroPython web server on a resource-constrained Pico W embedded system to provide real-time control via browser UI

Software Engineer Intern

Suga International Holdings Limited

June 2024 – August 2024

Hong Kong SAR

- Developed computer vision models for dog/cat detection with $\geq 99\%$ accuracy running on NVIDIA Jetson for commercial robotics applications.
- Utilized Python to efficiently preprocess and optimize image datasets with 80K+ images, streamlining model training and decreasing training time to save computing cost.

Lighting Simulation Intern

Green Light Multiplex

June 2023 – August 2023

Hong Kong SAR

- Created energy-efficient lighting simulations and deployed IoT/5G systems, to secure public lighting contracts in Hong Kong

PROJECTS

Bookshelf Scanner | *React, Python, Flask, Next.js*

- Created a full-stack web application with a Flask backend and a REST API.
- Implemented OCR and LLM to extract book title data from images and retrieve book details.
- Used React frontend to display book reviews and descriptions from backend.

Automation Extension | *Python, Flask, Chrome Extensions*

- Built a Chrome Manifest V3 extension with a Flask backend to extract webpage elements and integrate with REST API for website automation.

Peer Tutoring Scheduler | *React, TS, Firebase, Next.js*

- Led a project to revamp a student-tutor scheduling system used by high school students.
- Implemented a full-stack web application with a Firebase SQL database and a React frontend.
- Utilized Google OAUTH 2.0 and email authentication for communication and data storage.

TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript/TypeScript, HTML/CSS, R

Frameworks/Libraries: React, Flask, Next.js, TailWind CSS, REST APIs, YOLO, PyTorch

Tools/Hardware: Git, Github, VS Code, CLion, IntelliJ, Firebase/Supabase

Spoken Languages: Trilingual in English, Mandarin, Cantonese