

# Anson NG

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## Education

### The Chinese University of Hong Kong (CUHK)

Bachelor of Science in Computer Science

Expected July 2027

Cumulative GPA: 3.88/4.00

- Dean's List Recipient | 2023 – 2024 | GPA: 3.88
- Received 7 Scholarships

## Experience

### Research Assistant, The Chinese University of Hong Kong

Apr 2024 – Present

- Optimizing batch sizes and intermediate node buffer sizes to enhance transmission efficiency under the batched sparse codes (BATS) scheme.
- Leading a team to develop a Python simulator to replicate wireless communication in multi-hop networks with BATS Codes as transmission method.
- Employing the simulator to measure maximum packet reception rates over time at the destination node in Line network scenarios with packet-loss.

### Instructor, SKH Lam Woo Memorial Secondary School – Hong Kong

June 2023 – Aug 2024

- Instructed 15 Form 3 to 5 students in 2 enrichment courses: Advanced Programming (Python), and Data Structure and Algorithms (Kotlin), enhancing their coding proficiency.
- Developed lesson materials and coding exercises, deepening students' mastery of object-oriented programming, algorithmic concepts while utilizing Git to submit their course works.
- Mentored students for the Hong Kong Olympiad in Informatics Competition through targeted coaching, resulting in 3 advancing to the Finalist stage.

### Programmer, SKH Lam Woo Memorial Secondary School – Hong Kong

July 2023 – Dec 2023

- Converted a paper-based disciplinary system to a paperless solution using Google Suite, resolving issues with merging records from different departments and reducing manual data entry.
- Developed workflows with JavaScript-based Google Apps Script, integrating with existing FoxPro-based administrative systems, to retrieve and update student data and generate reports.

## Projects

### Packill, Full Stack Online Learning Platform – Vue.js, Tailwind CSS, PostgreSQL

Dec 2022 – July 2023

- Initialized Packill as an experimental startup project to deliver hybrid courses with Markdown, interactive demos and practices, earning enthusiastic feedback from pre-university students.
- Designed API endpoints with Strapi V4 as the backend framework, PostgreSQL for data storage, and JWT authentication, enabling user management and course progress tracking.
- Built a responsive Vue.js frontend with Tailwind CSS and an in-house Venust UI component library, reducing UI development time by 50%.
- Customized the markdown renderer's syntax tree to support embedded Vue components in Markdown files, simplifying preparation for interactive learning experiences.

### RISC-V Computer Simulator – C, RISC-V

Jan 2025 – Apr 2025

- Developed a 32-bit RISC-V simulator to interpret assembly files by translating into the core instruction format.
- Simulated the RISC-V Datapath by looping fetch-decode-execute cycles to model processor behavior, including data transfer between register file, main memory and data bus, enabling full execution of RV32I instructions.

## Skills

**Communication:** Cantonese (Native), English (IELTS 8.0), Mandarin (Fluent), Swedish (A1)

**Programming Languages and Frameworks:** Kotlin, C, Java, SQL, Vite, Vue.js, Tailwind CSS, HTML, CSS, JavaScript

**Computer Architecture and Assembly:** RISC-V