

# David Hua

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## About Me

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I am a motivated and community-minded computer science student at the University of British Columbia with strong experience in teaching assistance, research, and academic program coordination. Passionate about promoting inclusive science education and supporting diverse learners through clear communication, mentorship, and structured program delivery. Skilled in collaborative planning, problem solving, and cross-disciplinary teamwork across academic and outreach settings.

## Education

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**University of British Columbia**, B.Sc in Computer Science August 2024 - Present

- GPA: 4.33/4.33 (91.5/100)
- Honors: Faculty of Science International Student Scholarship, UBC Dean's Scholar

**Chinese University of Hong Kong, Shenzhen**, B.Eng in Computer Engineering June 2023 - August 2024

- GPA: 3.7/4.0

## Experience

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**Undergraduate Teaching Assistant (CPSC 110)**, UBC. (Paid, Part-time, In-person) Jan 2026 – April 2026

- Led weekly lab sessions for CPSC 110 (Computation, Programs, and Programming) with two other TAs, guiding 30+ students through programming exercises and conceptual challenges.
- Conducted interactive grading sessions, evaluating student assignments in person by discussing their code, problem-solving approach, and understanding of core computing concepts.
- Hosted office hours and actively supported students on Piazza, answering technical and conceptual questions to ensure timely learning support.
- Collaborated with instructors and TAs to align grading criteria and maintain consistent assessment standards across lab sections.

**QA Intern**, GHz Technology Ltd. (Paid, Full-time, In-person) May 2025 – June 2025

- Conducted independent end-to-end testing of a hospital mobile application, covering full UI functionality prior to internal release.
- Designed and maintained 100+ structured test cases; identified 21 bugs and 4 usability issues, including 4 missed by the internal QA engineer.
- Collaborated with QA Engineers and developers to triage, report, and verify fixes using internal tracking tools.
- Supported UI design iteration in early stage of internship by adapting layouts based on evolving client requirements using Figma.

**Undergraduate Research Assistant**, CUHK(SZ). (Paid, Part-time, In-person) January 2024 – July 2024

- Developed and implemented a web crawler to automatically retrieve ESG reports from corporate websites, enhancing data acquisition efficiency.
- Converted PDF documents into text, increasing data accuracy and reliability.
- Employed advanced large language models to extract critical information from text, streamlining the data processing workflow.
- Created well-designed prompt, significantly reducing the incidence of hallucinated or inaccurate data by 4%, bolstering the integrity of research outcomes.

**Finance Officer**, CUHK(SZ) IEEE Student Branch. (Volunteer, Part-time, In-person) August 2023 – July 2024

- Established financial oversight system for a 200+ member IEEE branch, managing reimbursements, student funding requests, and compliance with university policies.

- Initiated and managed a reimbursement project for IEEE membership fees, funded by the School of Science and Engineering, to boost student membership in the global IEEE community.

## Projects

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### UBC Course Visual Planner

[View the project on GitHub](#)

- Developed a course-visualizing and planning tool designed to assist students in planning their academic schedules and exploring future courses.
- Ensured accessibility by deploying the tool across multiple platforms, including a dedicated website and a PC application.
- Tools Used: React, JavaScript, HTML/CSS, Figma

### Identifier System to Enhance ASCII Art Recognition in LLMs

[View the project on GitHub](#)

- Designed a lightweight content-moderation tool integrating LLM and VLM models to detect offensive ASCII art.
- Improved recognition accuracy from 12% → 81% and reduced hallucination from 88% → 14% through image-based rerouting.
- Implemented reproducible experiments and statistical validation (t-test, bootstrap) in Python.
- Tools Used: Python (JupyterNotebook)

### UBC MineCraft Player Engagement Analysis

[View the project on GitHub](#)

- Analyzed player behavior on a UBC-hosted Minecraft server using player and session data to identify which types of players contribute the most data, aiding targeted recruitment for future research.
- Tools Used: Python (JupyterNotebook)

## Skills

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### Technical Skills

- **Programming Languages:** Python (Pandas, Scikit-learn, TensorFlow, PyTorch, NumPy), Java, C, C++, JavaScript/TypeScript, R
- **Testing:** Test case design, regression testing, bug tracking, defect triage, Testing & QA Documentation
- **Data & Automation:** Data Cleaning, ETL Pipelines, Web Crawling, PDF/Text Extraction, Prompt Engineering
- **Design Tools:** Figma, UI mockup adaptation, client-driven iteration
- **Software Engineering:** Git/GitHub, Docker, VSCode, UML-based Architecture Design
- **Web Development:** HTML, CSS, JavaScript

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### Language

- English (Advanced)
- Mandarin (Proficient/Native)
- Shanghainese (Advanced)