Derek Chu

Year 2, Combined Honours in Computer Science and Mathematics

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Relevant Links: [LinkedIn](#) | [GitHub](#)
Languages: JavaScript, Python, Java, C, C++, R, HTML/CSS, Racket, MATLAB
Frameworks and Technologies: Git, Vue, Tailwind CSS, Jira, Visual Studio Code

EDUCATION

The University of British Columbia   **Vancouver, BC**
B.Sc., Combined Honours in Computer Science and Mathematics   *Anticipated Graduation: Nov. 2026*
- **Science Scholar Recipient** *(*cumulative average **90%+** with full course load).
- Coursework: Algorithms and Data Structures, Software Design, Computer Systems, Linear Algebra, Statistics, Mathematical Proof, Linear Optimizations

WORK EXPERIENCE

UBC Computer Science Department   **Vancouver, BC**
Undergraduate TA for CPSC 121: Models of Computation   *Jan. 2024 – Present*
- Effectively coordinate and oversee weekly **labs of 30 students**, balancing multiple tasks in a fast-paced environment to facilitate exercises in mathematics, first-order logic, and circuit construction.
- **Interface between students and professors** to address academic inquiries and assist with administrative procedures.

BrainDump   **Vancouver, BC**
Software Engineer – Contract-Based   *Sep. 2023 – Nov. 2023*
- Worked in a small team of **3 developers**, regularly engaged in code reviews and product discussions.
- Integrated OAuth 2.0 for **third-party authentication** capabilities allowing users to login through Google and Facebook, increasing **user registration by 30%.**
- Designed a logging system for user events using **Elasticsearch** for data storage and quick retrieval alongside **Kibana** to handle real-time **data visualization and monitoring of KPIs**, resulting in an **increase of user retention by 20%**.

PAI Health   **Vancouver, BC**
QA Tester – Contract-Based   *Dec. 2021 – May 2022*
- **Identified and logged 60+ issues** involving the collection, measure, and analytics of data using **Jira.**
- Conducted field tests to verify beta and production code using **Apple TestFlight**.
- Communication with developer teams over **Slack and daily stand-ups** hosted on Zoom.

TECHNICAL PROJECTS

DOER | [Live Demo](#) | [GitHub](#) | (JavaScript, HTML, CSS, Git)   **Jan. 2024**
- Developed a **web app** to group and display tasks using date-fns to handle dates.
- Modified the **daisyUI** component library for **TailwindCSS** for intuitive and responsive designs.
- Utilized the Web Storage API to handle local **data persistence**.
- Leveraged SOLID principles to encourage maintainability and ease of testing/debugging.

CLARIFY | [Devpost](#) | [GitHub](#) | (JavaScript, HTML, CSS, Git)   **Nov. 2023**
- Chrome extension built during a hackathon which translates English idioms into simple sentences tailored for ESL students.
- Implemented asynchronous communication with the backend using the **Fetch API.**
- Enhanced **session management and security** by generating session-specific **UUIDs**, incorporating robust error handling and Cloudflare response management to maintain functionality under varying network conditions.
- Applied the **Tailwind CSS** framework to ensure a clean and consistent user interface.

Wishlist Management System | [GitHub](#) | (Java, JavaX Swing, JUnit, JSON, Git)   **Jan. 2023**
- Test Driven Development using **JUnit** framework achieving **100% coverage** guided by the realization of **user stories**.
- Developed robust GUI through **JavaX Swing**, implemented **data persistence** using a third-party JSON package, all while adhering to **OOP design patterns** for future maintenance and scalability.
- Evaluated UML class diagram and applied design patterns, leading to a **25% reduction** in code coupling and **20% increase** in code cohesion.