

# Derek Chu

## Year 2, Combined Major in Computer Science and Mathematics

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**Languages:** Java, C, C++, Python, JavaScript, R, MATLAB, HTML, CSS, Racket

**Frameworks and Libraries:** React.js, JUnit, tidyverse, ggplot2, dplyr

**Technologies and Tools:** Git, Visual Studio Code, IntelliJ, GDB

### WORK EXPERIENCE

#### PAI Health

Vancouver, BC

QA Tester – Contract-Based

Dec. 2021 – May 2022

- Conducted field tests to verify beta and production code using Apple TestFlight.
- Using Jira, identified and logged issues involving the collection, measure, and analytics of fitness data.
- Communication with developer teams over Slack and daily stand-ups hosted on Zoom.

#### CoCo Fresh Tea & Juice

Burnaby, BC

Shift Leader

Mar. 2021 – Apr. 2022

- Excelled in fast-paced environment by adeptly handling diverse situations with patrons.
- Skillfully directed new employees to improve team cohesion and productivity.

### TECHNICAL PROJECTS

**Calculator** | [GitHub Demo](#) | (JavaScript, HTML, CSS, Git)

August 2023

- Leveraged DOM manipulation and event handling to enhance web interactivity.
- Extended functionality using keyboard listeners enable typed input.
- Utilized modular code organization to encourage maintainability and ease of testing/debugging.

**Wishlist Management System** | [GitHub](#) | (Java, Swing, JUnit, JSON, Git)

January 2023

- Developed GUI using Swing, allowing user to create and manage a wish list.
- Utilized data-driven testing with JUnit framework to create unit tests and ensure thorough coverage.
- Implemented data persistence using a third-party JSON package.
- Adopted OOP design principles to ensure organized and maintainable code.
- Evaluated UML class diagram to apply design patterns to reduce coupling and increase cohesion.

**Heart Disease Pain Classifier** | [GitHub](#) | (R, JupyterLab)

December 2022

- Implemented a KNN algorithm to classify chest pain using cross-validation to choose neighbours.
- Employed libraries like tidymodels and ggplot2 to read, clean and wrangle data, and visualize analysis.

### LEADERSHIP EXPERIENCE

**Taiwanese Canadian Cultural Society**

Vancouver, BC

Volunteer

Jan. 2020 – Present

- Monitored and assisted groups of 20+ children in cultural activities to facilitate a safe environment.
- Collaboratively formed daily schedules within a dynamic team environment.

**ICPC Regionals 2023**

Vancouver, BC

Logistics Volunteer

Feb. 2023

- Registered and organized competitors and addressed questions during competition.

### EDUCATION

**The University of British Columbia**

Vancouver, BC

B.Sc., Computer Science and Mathematics

Sep. 2022 – Nov. 2026

- Science Scholar Recipient (cumulative average 90%+ with full course load).
- Coursework: Numerical Computation, Software Design, Computer Systems, Algorithms and Data Structures, Linear Algebra, Advanced Calculus, Discrete Math, Mathematical Proof, Statistics.