Jonathan Chan

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SKILLS

Languages:	Python, Java C, C++, JavaScript, TypeScript, C#, Bash, SQL,
Frameworks and Technologies:	Git, React, JUnit, HTML, CSS, .NET
Relevant Coursework:	Data Structures and Algorithms, Software Construction, Introduction to Computer Systems, Applied Machine Learning

EXPERIENCE

Software Development Co-op — Sep 2022 – Apr 2023
Alida — *Vancouver, BC*
- Transition legacy surveys app to a modern tech stack consisting of React, TypeScript, and Material UI.
- Maintains compatibility of legacy .NET backend with new frontend features.

Lead Tutorial Teaching Assistant, CPSC 121: Models of Computation — Jan 2022 – Aug 2022
University of British Columbia — *Vancouver, BC*
- Solidified understanding of proofs, logic, and number representations by facilitating lab and office hour discussions.
- Taught and summarized techniques clearly using visual references, yielding positive student feedback.

Volunteer, Molecular Modelling Subgroup — May 2021 – Aug 2022
Reid Research Group at UBC — *Vancouver, BC*
- Created Python and Bash scripts to automate and scale previously manual processes on HPC servers.
- Replaced functions of traditionally used GUI applications, leading to greater research throughput.

PROJECTS

Appeal No More, Google SPS 2022 | *JavaScript, Java, HTML, CSS, SQL* — Jun 2022 – Jul 2022
- Collaborated closely with a team of peers using Git to approve and merge the development of incremental features.
- Create and configure SQL database and tables on Google Cloud.
- Implemented REST API in Java Servlet backend to query Google Cloud SQL database for complete CRUD operations.
- Utilized Google Cloud Storage libraries to enable image upload and retrieval.
- Utilized the Google Maps API make posts interactive through a map, and implemented creation and editing of pinned locations.

Friendly Neighbor, BCS Hacks 2022, 5th | *JavaScript, React, HTML, CSS* — Mar 2022
- Built interactive post making webapp using React.
- Set up a REST API using JSON Server to enable CRUD operations for posts.
- Created webforms that aid post creation, editing, and deletion, and collaborated changes using Git.

Conformer Counter | *Python* — Nov 2021 – Dec 2021
- Developed a program that analyzes the geometry of molecules from coordinate files and classifies them.
- Identified an algorithmic approach to problem and implemented a graph search.
- Scaled the challenge of geometry analysis to thousands of molecules to validate the accuracy of a software package.

Linear Progression Training Program | *Java, JUnit, Swing* — Oct 2021 – Nov 2021
- Developed a weight-training desktop application using OOP principles and implemented a GUI using Swing.
- Wrote JUnit tests and implemented functions in a test-driven manner.
- Implemented data persistence in JSON format.

Computational Chemistry Tools | *Python* — Nov 2021 – Dec 2021
- Developed CLI applications that automate the process of file conversion.
- Implemented file parsing and read/write exception handling.

EXTRACURRICULARS

Maple CTF 2022, 12th/70 | *Python, C, GDB, pwntools, Ghidra,* — Jan 2022
- Applied understanding of stack memory and function calls to exploit program vulnerabilities for flags.
- Learned to read and follow dissembled C code to determine vulnerabilities in program binaries.

EDUCATION

Bachelor of Computer Science — Sep 2021 – May 2024
University of British Columbia | GPA: 90.4% — *Vancouver, BC*

BSc. Combined Biochemistry and Chemistry — Sep 2015 – May 2020
University of British Columbia — *Vancouver, BC*