

# Jonathan Chan

chan\_jon@outlook.com ❖ (778) 953-6781 ❖ linkedin.com/in/chan-jon ❖ chanjonathan.github.io

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## SKILLS

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**Languages:** Python, JavaScript, TypeScript, Java, C#, C, 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

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## EXPERIENCE

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**Software Development Co-op** Sep 2022 – Apr 2023  
*Alida Vancouver, BC*

- Develops and transitions legacy web app to a modern frontend tech stack consisting of React, TypeScript, and Material UI.
- Updates legacy code in .NET backend to support new features.
- Collaborates with team to accomplish product pushes in bi-weekly scrum sprints and to ensure production pipeline is clear.

**Lead Tutorial Teaching Assistant, CPSC 121: Models of Computation** Jan 2022 – Aug 2022  
*University of British Columbia Vancouver, BC*

- Facilitated lab and office hour discussions by actively listening to student responses and providing insight.
- Summarized and demonstrated proof techniques in tutorial with enthusiasm and clarity, 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

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**Appeal No More, Google SPS 2022** | *JavaScript, Java, HTML, CSS, SQL* Jun 2022 – Jul 2022

- Collaborated with a team of peers to do industry best practices such as code reviews to add incremental features.
- Created and configured 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.
- Created interactive user interface using HTML, JavaScript, and Google Maps API, that made post viewing and editing seamless.

**Friendly Neighbor, BCS Hacks 2022, 5<sup>th</sup>** | *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.

## EXTRACURRICULARS

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**Maple CTF 2022, 12<sup>th</sup>/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 disassembled C code to determine vulnerabilities in program binaries.

## EDUCATION

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**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*