

# Jonathan Chan

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

---

## SKILLS

---

**Languages:** Python, JavaScript, TypeScript, Java, C#, C, C++, Bash, SQL,  
**Frameworks and Technologies:** React, Knockout, jQuery, Jest, Sinon, NUnit, JUnit, Node, Git, HTML, CSS, scikit-learn

## EXPERIENCE

---

**Software Development Co-op** | *React, Knockout, jQuery, C#, TypeScript, JavaScript, Jest, Sinon* Sep 2022 – Apr 2023  
*Alida* *Vancouver, BC*

- Develops new frontend web interfaces for desktop and mobile using React, Knockout, and jQuery.
- Develops C# .NET and TypeScript backends and endpoints to support new features.
- Writes frontend interface unit tests using Jest and Sinon, and backend unit tests using NUnit.
- Collaborates in bi-weekly scrum, sprint planning, and ticket analyses.

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

- Facilitated laboratory and office hour discussions on concepts in logic and proof.
- Demonstrated proof techniques clearly as a tutorial instructor, yielding positive student feedback.

**Volunteer, Molecular Modelling Subgroup** | *Python, Bash* 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

---

**TabTriage, BCS Hacks 2023, 3<sup>rd</sup> Place** | *JavaScript, OpenAI API, chrome.tabs API, HTML, CSS* Mar 2023

- Created a Chrome browser extension that uses AI to group and generate labels for tabs.
- Utilized OpenAI API to produce groupings and generate group labels.
- Utilized chrome.tabs API to extract tab data and create tab groups and group labels.

**AnalyticsAI, Alida Hacks 2023, 2<sup>nd</sup> Place** | *React, JavaScript, OpenAI API, Whisper API, SQL, CSS* Mar 2023

- Leveraged AI capabilities to build a webapp that converts plain speech to SQL queries to simplify fetching data for end-users.
- Utilized Whisper API to convert speech to text, then passed these as prompts to OpenAI API to generate SQL queries.
- Created a backend endpoint to query database and return the analytics data to be visualized.
- Recognized as top priority of all hackathon projects to be implemented into production.

**Appeal No More, Google SPS 2022** | *JavaScript, Java, Jakarta Servlet, GCP, SQL, Google Maps API, HTML, CSS* Jun 2022 – Jul 2022

- Built a full stack webapp utilizing Google Maps API to display posts by location.
- Wrote backend endpoints to handle all CRUD functions in Jakarta Servlet.
- Configured database tables and formed queries for backend to get and update Google Cloud SQL database.
- Utilized Google Cloud Storage libraries to enable image upload and storage.

**Friendly Neighbor, BCS Hacks 2022, 5<sup>th</sup> Place** | *JavaScript, React, JSONServer, CSS* Mar 2022

- Created a post making webapp with modal webforms for CRUD operations.
- Performed REST operations using JSON Server as backend and database.

**Conformer Counter** | *Python, Matplotlib* Nov 2021 – Dec 2021

- Developed a program that analyzes the molecular simulation outputs by classifying their conformation/geometry.
- Designed classes and methods from scratch, including a graph class to store molecular connectivity.
- Implemented graph search algorithm with vector calculations to look for specific geometry criteria.
- Scaled the task of geometry analysis to thousands of molecules per file for multiple files.

## EXTRACURRICULARS

---

**12<sup>th</sup>/70, Maple CTF 2022** | *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

---

**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*