

Jonathan Chan

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SKILLS

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

EXPERIENCE

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

- Develops new features and transitions existing features from legacy tech stack to a modern tech stack.
- Updates frontend and backend legacy code to support new features.
- Develop features with translatable text and localized input support for text direction & formatting, using software localization tools.
- Collaborates in bi-weekly scrum sprint and sprint planning.
- Communicates with team to keep production pipeline clear and to accomplish a weekly product push.

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 | *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

AnalyticsAI, Alida Hacks 2023, 2nd | *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.

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 CRUD webapp utilizing Google Maps API to display posts by location.
- Utilized Google Cloud Storage libraries to enable image upload and download.
- Implemented REST API in Java Servlet backend that queries and updates Google Cloud SQL database.

Friendly Neighbor, BCS Hacks 2022, 5th | *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

12th/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*