

Jonathan Chan

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SKILLS

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

EXPERIENCE

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

- Contributed to the creation of a modern UI to replace outdated survey software, utilizing React with a mobile-first approach.
- Developed backend features and added new backend endpoints in .NET backend and TypeScript based backend.
- Consulted with UX and product teams to devise new behavior in edge case scenarios.
- Improved workflow for multi-region customers by adding automatic media re-uploading step to cross-panel survey import feature.
- Reduced manual steps for customer with new endpoint for updating survey translations based on calls to customer server.
- Collaborated in sprint planning and ticket analyses, leading to 4 sprints without ill-defined tickets or scope creep.
- Logged over 100 defects in blitz testing and completed over 130 tickets.

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

- Delivered lessons on circuits, logic, and proof techniques to students, resulting in positive feedback.

Volunteer, Molecular Modelling Subgroup | *Python, Bash* May 2021 – Aug 2022
Reid Research Group at UBC Vancouver, BC

- Enhanced computational throughput by automating the Gaussian input file creation process through script development for HPC.
- Generated novel molecules to screen by using scripts to combine machine-learning generated sidechains with backbone of interest.

PROJECTS

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

- Innovated a Chrome extension employing AI to categorize and label tabs for improved organization.
- Utilized OpenAI API to produce categorizations and category labels.
- Called chrome.tabs API to extract tab data, create labelled groups, and move tabs into groups.

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

- Applied AI technologies to develop a web application converting plain speech to SQL queries to simplify data retrieval 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 in production.

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

- Developed a full-stack web application using the Google Maps API to display location-based posts.
- 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.

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

- Engineered a program for analyzing molecular simulation outputs by classifying their conformation and 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 process 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 knowledge of stack memory and calling conventions to exploit program vulnerabilities for flags.
- Learned follow and interpret C code from disassembled binary to determine behavior of a program.

EDUCATION

Bachelor of Computer Science Sep 2021 – May 2025
University of British Columbia | GPA: 90.7% Vancouver, BC

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