BRANDON CHAN

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WORK EXPERIENCE

Excelar Technologies
Software Engineer Intern

Sep 2024 - Apr 2025
Vancouver, BC

- Redesigned the visualization of **Careflow** datasets utilizing CDK and TanStack libraries, optimizing load times by **75%**
- Developed and implemented a virtualization algorithm for displaying AI marketplace models using **Angular, PostgreSQL** and **AWS S3** deploying features with **Jenkins**, creating an application similar to HuggingFace
- Developed and deployed redesigned **Careflow** timeline implementing **D3 JS** framework reducing scrolling latency by **50%**
- Designed and implemented tools API client streamlining all front-end API calls, reducing memory allocation and storage by **25%**
- Constructed and implemented styling presets, templates, directives, and guidelines product-wide using **Tailwind** and **DaisyUI** reducing development time by **20%**

Lantronix Inc
Junior Programmer

May 2021 - Sep 2021
Vancouver, BC

- Wrote and implemented **Python** scripts for training Open-Q Development Kits, streamlining the implementation process and reducing pairing times by **50%**
- Developed and executed test scripts to verify the functionality and performance of factory-produced Open-Q Development Kits, eliminating manual testing and reducing test time by **95%**
- Assembled and configured Open-Q Development Kits and TOGG computational infrastructure, including soldering and crimping

PROJECTS

IceVision / *Python, YOLOv10, Firebase, PostgreSQL, React, AWS, Docker, PyTorch*
- Fine-tuned **YOLOv10** object detection model using **PyTorch** to recognize hockey players' positions achieving up to **90%** recall
- Trained and deployed the fine-tuned model on **Replicate**, accessed by a **FastAPI** endpoint, containerized on **Docker** and hosted on **AWS S3-backend instance**
- Developed front-end application with **React**, deploying application with **Vercel**

Typle / *React, Express.js, Node.js, MongoDB, Vercel, Socket.IO, Google Cloud Platform*
- Developed a full-stack typing website using **React**, allowing users to progress through levels, track high scores and leaderboards, buy cosmetics, and battle other players in real-time typing battles
- Implemented **Socket.IO** web-sockets allowing for seamless communication between multiple players simultaneously
- Routed backend APIs using **Axios** implementing **MongoDB NoSQL** database and deploying project with **Google Cloud Platform** and **Vercel**

PayTrack / *VueJS, Firebase, PostgreSQL*
- Developed an invoice tracking web-application using **VueJS** to help users manage invoice statuses
- Configured and deployed application using **Vercel** and **Firebase**

Factory Escape / *Java, Swing, HTML*
- Designed and developed a 2D Java-based game using **Swing** for GUI rendering and game loop control
- Implemented unit and integration tests covering every individual aspect and behaviour of the game's characters and objects

Bank simulation application / *C++*
- Conceived and implemented arrival, departure, and transaction calculator applications using C++ using a priority queue ADT and binary heap data collection sorting arrivals in chronological order
- Displays arrival, departure, and time in line for each customer as well as average transaction time and time in line using priority queue

EDUCATION

Simon Fraser University
Bachelor of Science, Computer Science

Expected Graduation Dec 2026
3.92/4.33 CGPA

Courses: Data Structures and Algorithms, Database Systems, Software Engineering, Computer Systems, Artificial Intelligence

Awards: Mark and Nancy Brooks Computing Innovation Award, SFU Undergraduate Open Scholarship (x3), SFU Alumni Scholarship

SKILLS

Programming Languages: Swift, Kotlin, Java, JavaScript, TypeScript, C, C++, Python, x86, HTML, XML, CSS, SQL, BASH

Frameworks/Libraries: React, SwiftUI, Angular, Next.js, Express.js, Node.js, Vue.js, Mongoose, Tailwind

Developer Tools/Technologies: Git, Docker, AWS, Linux, MySQL, PostgreSQL, NGINX, Postman, Jira, PyTorch, MongoDB, Firebase

Interests: YouTube (100,000 subscribers) ↗, Skiing, Snowboarding, Hockey, Fitness, Chess, Hikes