BRANDON CHAN

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WORK EXPERIENCE

CanAI Garage - Public Services and Procurement Canada
Sep 2025 - Dec 2025

Machine Learning Software Engineer Intern — *Vancouver, BC*

- Designed and shipped a **FastAPI** microservice for model inference (image/video and tabular use cases), containerized with **Docker** and deployed to **Kubernetes/OpenShift**; added health checks, request validation, and structured logging for production readiness
- Operationalized models with **ONNX** Runtime/**PyTorch** + async batching, returning JSON results with calibrated confidence scores; added request-level SLOs and reduced p95 latency by **75%**
- Containerized 5+ backend services with **Docker** and deployed them on a **Kubernetes** cluster, with a **99%** uptime

Excelar Technologies
Sep 2024 - Apr 2025

Software Engineer Intern — *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
May 2021 - Sep 2021

Junior Programmer — *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%**

PROJECTS

IceVision | *Python, YOLOv11, Ultralytics, ONNX, FastAPI, Docker, AWS ECS Fargate, CloudFront, React, NextJS, Vercel*

- Fine-tuned **YOLOv10** object detection model using **Ultralytics** to recognize hockey players' positions achieving up to **90%** recall
- Exported trained model to **ONNX** and deployed a **FastAPI** inference service, containerized on **Docker** and hosted on **AWS ECS Fargate** instance, fronted by an Application Load Balancer and **CloudFront** for HTTPS access
- Developed a front-end in **Next.js/React** (deployed on **Vercel**) that lets users upload or preview videos and visualizes detections with overlayed bounding boxes.

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** 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

EDUCATION

Simon Fraser University
Expected Graduation Dec 2026

Bachelor of Science, Computer Science — *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, SQL, Haskell, Rust, Julia

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