

Jonathan Ung

Vancouver, BC, Canada

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EDUCATION

Simon Fraser University

Bachelor of Science, Computing Science, Statistics Minor

Jan 2024 – Aug 2027

Burnaby, BC

EXPERIENCE

Software Engineering Co-op - Infotainment Applications

Rivian and Volkswagen Group Technologies

May 2025 – Dec 2025

Vancouver, BC

- Accelerated feature development by 20% by contributing to a scalable, custom Android MVVM-style framework, enabling faster iteration and testing of new UI features and business logic
- Increased analytics coverage within the media application by 50% through instrumenting UI interactions, errors, and authentication
- Collaborated with integration QA developers to create automated tooling for reproducing, documenting, and isolating root causes, reducing time spent triaging bugs by 30%
- Crafted an automated deployment suite using Bash and Python for vehicle owner's manuals, reducing time spent publishing and testing by over 80%

Software Team Lead & Software Developer

SFU Robot Soccer Club

Feb 2024 – Present

Burnaby, BC

- Led a 20+ member software team, establishing workflow standards that improved sprint throughput by 30%
- Spearheaded development and planning of multi-agent robotic soccer software using C++ and Behavior Trees, enabling performant real-time decision-making and pathplanning for 6 autonomous robots
- Architected an asynchronous Navigator Command API with message-driven architecture and multithreading, eliminating deadlocks and enabling smooth real-time robot navigation
- Deployed GitLab CI/CD pipeline with Docker build environment caching and multi-stage testing, cutting average pipeline runtime by 40%, while standardizing build and test workflows across Ubuntu runners

Software Engineering Intern - Mobile Applications

MVP IT Solutions

Aug 2022 – Nov 2022

Remote

- Engineered reusable Flutter UI widgets and optimized Firebase APIs through payload aggregation, reducing UI development time by 15% and API calls by 40%

PROJECTS

YOLO Traffic Analysis - Vision Model Data Analysis | *Python, PyTorch, OpenCV, Pandas, Numpy, Scikit*

- Automated benchmarking of YOLOv3, YOLOv5, and YOLOv8 on 20,000+ labeled images, evaluating precision, recall, IoU, and F1-score to identify optimal trade-offs in model performance
- Streamlined modular evaluation pipeline using OpenCV for preprocessing, Pandas/NumPy for data handling, and Scikit-learn/Matplotlib for statistical analysis, ensuring reproducibility across experiments

Transcribr - Discord Transcription Service | *Javascript, Discord.js, Opus, ffmpeg, GPT-Whisper, Docker*

- Developed a Discord transcription bot using Discord.js and Opus, enabling real-time speech-to-text conversion for voice channels with accurate speaker diarization for hundreds of concurrent users
- Designed an audio streaming pipeline with Opus encoding and ffmpeg, achieving one-way latency of 50ms

Pignance - Finance Tracking Service | *Javascript, Next.js, Python, FastAPI, MongoDB, Docker, Defang, JWT*

- Built an OCR pipeline with PyTesseract and a LLaMA 3.1 interface to extract, interpret, and categorize receipt data, achieving a 97% detection and classification accuracy
- Produced a scalable backend utilizing FastAPI, MongoDB, and JWT, implementing REST APIs for secure receipt storage, retrieval, and categorization across multiple users

TECHNICAL SKILLS

Programming: C++, Java, Kotlin, Javascript, Matlab, Python, R, Selenium, SQL, NoSQL, Docker, AWS

Web Development: React, Next.js, HTML, CSS, Spring Boot, .NET, MongoDB, PostgreSQL, Express.js, JWT

App Development: Android, Swift, SwiftUI, Jetpack, Flutter, Dart, React Native, Qt6, MVVM

Computer Vision: OpenCV, Open3D, Pillow, CNN/RNN, Classification, Detection, Feature Matching & Extraction

Machine Learning & Big Data: NumPy, PyTorch, Tensorflow, RL, Matplotlib, Pandas, Spark, Hadoop, Kaggle