BRIAN NGUYEN

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EDUCATION

Bachelor of Software Engineering (BSEng), University of Victoria **Expected April 2027**
Standing: 3rd year - Sessional GPA 3.4/4

SKILLS

Java, C, Python, JavaScript, Node.js/Express, SQL, Weaviate (vector DB), Pandas/NumPy, HTML/CSS, React, Git, Bash, Docker

EXPERIENCE

Backend Engineer Co-op, Nexle (**Node.js, Python, RestAPI, Project management**) **August 2025**

- Built and extended RESTful APIs in Node.js/Express, analyzing existing endpoints and adding new functionality to support business needs.
- Designed database schemas and implemented a hybrid semantic + vector search (BM25 + embeddings) to improve store lookup accuracy.
- Integrated GPT APIs into production workflows and implemented Anthropic MCP, enabling AI assistants to access internal tools like the hybrid search service.
- Collaborated on an AI posture-detection feature for a commercial yoga app, contributing code reviews, test plans, and documentation.

Electrical & Software Subteam, UVic Hybrid (**Matlab Simulink, C++**) **December 2024**

- Optimized control system for new hybrid race car using Matlab Simulink
- Built and optimized a driver interface to show telemetry, through an array of arduinos in C++

PROJECTS

Co-op Automation Tool • github.com/briannguyen03/lim_scraper

- Automated job search by building a **Python scraper and Node.js + OpenAI** resume matcher, cutting evaluation time from minutes to seconds while delivering scored job reports via email.

Auto Track • Campus Auto Group

- Built a full-stack vehicle tracking system for Nissan Campus Auto Group (**Node.js, JavaScript, HTML/CSS**) with a **RESTful API**, real-time UI updates, and advanced search and filtering.

Drawing Using Machine Learning

- Built a machine learning-powered spatial drawing app (**JavaScript/p5.js, HTML, CSS**) with hand keypoint tracking and gesture recognition for intuitive drawing

Smart Bike Lane • ENGR 120 Class Project

- Collaborated on a smart bike lane system (**Python, JavaScript, HTML/CSS, Raspberry Pi**) that used sensors and dynamic lighting to improve visibility, integrating interactive controls and earning a **91% grade**.

Mini Projects

1. Unbeatable Tic Tac Toe • Built an interactive game with p5.js, implementing the minimax algorithm with recursion and state evaluation to create an unbeatable AI opponent
2. Conway's Game of Life • Developed an interactive cellular automaton simulation in JavaScript (p5.js), programming the four rules of life and enabling real-time user interaction

INTERESTS

I play piano and taught myself guitar, love hiking and camping, and I'm a big movie fan! I co-founded and was president of my high school film club.