BRIAN NGUYEN

Victoria, British Columbia

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EDUCATION

Bachelor of Software Engineering (BSEng), University of Victoria   **Expected April 2027**
Third-Year Student | Major GPA: 3.5/4.0

SKILLS

Programming Languages: C, Java, Python, JavaScript
Web Development (Backend): Node.js/Express
Databases: Postgres, MySQL
Data Analysis/Scientific Computing: Pandas/NumPy
Front-end: HTML/CSS
Tools & Infrastructure: Linux, Git/Github, Bash, Docker, Github Actions, CI/CD

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

Blackjack Q-Learning Agent • github.com/briannguyen03/blackjack-agent
- Engineered a **terminal-based**, two-action (Hit/Stand) **Blackjack game** from scratch in **C**, utilizing low-level structs and arrays for efficient game state representation and Q-table management.

- Implemented a Q-Learning agent, training it over **100,000** hands with an **epsilon decay algorithm** to balance exploration and exploitation, ultimately achieving an optimal playing policy with a **~41% win rate**.

Co-op Automation Tool • github.com/briannguyen03/lim_scraper
- Automated job search by using **Selenium + Beautiful Soup** to scrape and create a spreadsheet file, and connected a **Node.js + OpenAI API** 'resume matcher' with a custom analysis prompt. Cutting evaluation time from **minutes to seconds** while delivering **scored job reports via email (N8N webhooks)**.

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.**

INTERESTS

I play 2 instruments (piano + guitar), and make music in my free time. I love basketball, and have volunteered to coach 2 teams on two different continents so far! Sushi is my favourite food, and green is my favourite colour.