Nathan Au

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https://nathan-au.github.io

Education

CONCORDIA UNIVERSITY	**Montreal, Quebec**

- B. Eng. Software Engineering, CO-OP, Admission GPA 3.7/4.0 — 2024 – 2029

WEST CARLETON SECONDARY SCHOOL	**Ottawa, Ontario**

- OSSD, Info & Comms Tech (ICT) Specialist High Skill Major (SHSM) — 2020 – 2024

Technical Experience

Verification Engineering Intern	**Ottawa, Ontario**
Renaissance Network Reinvent	Sep. 2023 – Feb. 2024

- Designed and implemented functionality tests for computer systems and network hardware.
- Worked across various teams to debug and resolve performance issues.
- Optimized inventory tracking and data management systems for import/export logistics.

Projects

Graduation Ceremony Slideshow System | HTML, CSS, JavaScript, PHP, SQL, OAuth, Web Development

- Full-stack web application designed to streamline the creation and management of slideshows for graduation ceremonies
- Centralized dashboard to input, edit, bulk import student and bulk-upload photos with automatic resizing and assignment.
- Integrated external tools such as Google Sign-In OAuth 2.0 API, TinyMCE WYSIWYG editor and Bootstrap front-end framework to ensure a good user experience.

Antimicrobial Resistance MSA Prediction Model | Python, TensorFlow/Keras, Pandas/NumPy, ML

- Fully connected neural network (FCNN) deep learning model developed with Python and TensorFlow/Keras to predict optimal multiple sequence alignments (MSA) for antimicrobial resistance (AMR) research.
- One-hot encoding data pre-processing for machine-readable nucleotide sequences.
- Batch Normalization, LeakyReLU, and Adam optimizer for training stability.

AMICAE | Flutter, Firebase, Vertex AI, Mobile Development

- Mobile app designed to help students at Concordia University connect with potential study buddies, discover study spots, and stay updated on university events.

PartCart | Vue.js, TailwindCSS, Supabase, Web Design

- Web application designed for internal use at computer repair companies to manage the workflow of part requests from technicians to buyers.
- Implementation of part requests dashboard for technicians, approval dashboard for buyers, sorting & filtering by order details, and role-based authentication.

Relevant Skills

TECHNICAL SKILLS:

- Flutter, Vue.js, Python, C++, HTML, CSS, JavaScript, PHP, SQL, TensorFlow/Keras, Dart

APPLICATIONS:

- Visual Studio, VS Code, SOLIDWORKS, KiCad EDA, Arduino, Microsoft 365, Android Studio