Nathan Espejo

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EDUCATION

Western University — London, ON
Bachelor of Engineering Science in Software Engineering — *Aug. 2024 – May 2028*

EXPERIENCE

Software Developer — Sept 2025 – Present
3D Western — *London, ON*
- Developing an Dockerized 3D printing pipeline for a 24-printer farm, automating model slicing, orientation, support generation, and printability validation to deliver a free 3D printing service for students at Western University.
- Initiated training of a vision–language model by curating 3D assets via website scraping and building automated rendering scripts to generate labeled image datasets from 3D models.

Software Engineering Intern — May 2025 – Aug 2025
TeraGo — *Markham, ON*
- Developed a fully automated system to manage Jira tickets based on email notifications by using a Local LLM (Ollama) for structured and secure data extraction, Python for logic, and Microsoft's Graph API for email retrieval.

IT Intern — May 2025 – Aug 2025
Microcomputer Consulting Inc. — *Mississauga, ON*
- Configured and deployed client computers for multiple companies, including Windows installation, user account setup, and application/configuration changes based on company requirements.

PROJECTS

Auralis | *Next.js, Three.js, FastAPI, Gemini, ElevenLabs, face-api.js, Cloudflare* — Nov 2025
- Built an AI-powered virtual doctor providing face-to-face medical consultations with emotion-aware responses and post-consultation PDF reports, winning **Best AI Application Built with Cloudflare**
- Implemented emotion mismatch detection using face-api.js to identify when patients appear distressed while claiming to be fine, adapting Gemini AI responses to provide empathetic care based on detected emotional states.
- Deployed frontend to Cloudflare Pages with serverless backend, integrating Three.js for lip-synced 3D avatar rendering and ElevenLabs for natural voice interaction via TTS/STT.

EyeCandy | *TypeScript, Snap3D API, Shopify API, Gemini API* — Sept 2025
- Reimagined e-commerce by enabling users to instantly search for and visualize clothing from Shopify on themselves in AR using Snap Spectacles, winning the **Snap: Spectacles AR Runner Up Prize** at Hack the North 2025.
- Integrated Shopify Storefront API via a lightweight FastAPI backend to fetch product data (images, variants) and generate real-time JSON responses for AR rendering.
- Implemented Google's Gemini API to create item descriptions from product images to use as a prompt for Snap3D API to acheive conversion from 2D image to 3D model.

Lumen | *Unity3D, MongoDB Atlas, Flask, React* — Aug 2025
- Worked with a team to build a full-stack mental wellness app that provides personalized emotional relief through custom-tailored games, journaling, and AI-generated insights, winning **Best Use of MongoDB Atlas**.
- Created five games/experiences in Unity3D designed to deal with specific emotional states (e.g. anxiety, sadness, grief) based on research into therapeutic solutions (e.g. breathing exercises, emotional reflection).

Careerly | *Cohere AI, Unity3D* — Feb 2024
- Built an interactive 3D career fair platform allowing students to explore potential career paths while also addressing the underrepresentation of minorities in successful roles, winning **Best Use of AI** and **Third Place Overall**.
- Implemented Cohere's AI API as our conversational career assistants and used Unity3D to developer an immersive 3D expo completed within a 24-hour hackathon.

TECHNICAL SKILLS

Languages: Java, Python, C++, C#, JavaScript/TypeScript, Kotlin
AI / ML: Computer Vision, CNNs, Vision–Language Models (VLMs), PyTorch, TensorFlow, LLM APIs
Full-Stack & APIs: React, REST APIs, OpenAI API, Google Maps API
Systems & Tools: Linux, Git, Docker, MySQL, Unity3D, Android Studio
Embedded & Hardware: Arduino, ESP32, BLE, 3D Printing