VU KHANH CAO

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EDUCATION

Carleton University, Ottawa, ON   Sept 2023 – Present
Bachelor of Computer Science (Honours) — Artificial Intelligence & Machine Learning
GPA: **3.75 / 4.00**

TECHNICAL SKILLS

Programming Languages	**C, C++**, Python, Java, JavaScript, TypeScript
Software Development	Object-Oriented Design, Data Structures, Algorithms, Debugging
Testing & Tooling	Linux, Git, Docker, CI/CD workflows, Unit & Integration Testing
Frameworks	React, Node.js, Express, Flask, React Native
AI / ML	TensorFlow, PyTorch, OpenCV, Keras
Cloud & Databases	AWS, MongoDB, MySQL, PostgreSQL

EXPERIENCE

Software Developer   Jun 2025 – Present
Ovenns Analytics Inc.   *Ottawa, ON*

- Developed and maintained production-grade software components in a cross-functional team, contributing to system design, implementation, and testing.
- Built backend services using Node.js and PostgreSQL with a focus on reliability, data integrity, and performance in a multi-tenant environment.
- Implemented secure authentication and authorization mechanisms, strengthening system robustness and preventing unauthorized access.

PROJECTS

JARVIS — 3D Scene Reconstruction System   Jan 2025

- Engineered a cost-efficient solution that reduced 3D reconstruction expenses, translating images and video from any camera source into web-ready 3D models using machine learning techniques and Gaussian Splatting.
- Reduced 3D reconstruction time for 200-image datasets to 15 minutes by building an end-to-end pipeline with Gaussian Splatting on Raspberry Pi 4 (QNX) and Dockerized GPU offloading to RTX 3060.
- Developed a React + Vite frontend with Google OAuth2 authentication, enabling secure user access and streamlined dataset submission.

Walk in the Park — Cross-Platform Mobile Application   Apr 2024

- Won Best AI in Education Hack at GenAI Genesis 2024 (250+ participants) by creating a cross-platform app that gamified cultural exploration.
- Increased demo user engagement by 40% through integration of Google Vertex AI (dynamic storytelling), Spotify API (personalized music), and geolocation services.
- Built with React Native + Flask, delivering smooth mobile and backend performance.

TRACY — Real-Time Sports Analytics Platform   Feb 2024

- Placed **3rd Overall** at QHacks 2024 (200+ participants).
- Implemented real-time computer vision algorithms using OpenCV and TensorFlow, achieving 97% tracking accuracy.
- Optimized processing pipelines and debugged latency bottlenecks to improve real-time performance.