

# Sebastien Terrade

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## EDUCATION

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### Queen's University

Kingston, ON

*B.S. Computer Engineering – GPA: 4.15/4.3 (97%) – Dean's Scholar*

*Expected Graduation: April 2026*

- 1st Place - AI Collective KingHacks Hackathon
- 3rd Place - Next Generation of Medical Simulation Hackathon - \$1500 Reward
- Courses: Algorithms, ML & DL, Computer Vision with Deep Learning, Cryptography & Network Security

### Nanyang Technological University (Exchange Program)

Singapore

*January 2024 – May 2024*

## TECHNICAL SKILLS

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Languages: C/C++, Python, Java, SQL, Assembly, React/Typescript, PowerFX

Tools and Frameworks: PostgreSQL, Git, CI/CD, Linux, REST APIs

AI/ML: PyTorch, RAG, GraphRAG, LLM Evaluation, Prompt Engineering, Feature Engineering

## EMPLOYMENT AND RELATED EXPERIENCE

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### Ontario Power Generation

Pickering, ON

*Software Engineering Intern*

*May 2024 – August 2025*

- Built and maintained the Python and SQL backend for Nexus, an internal application that combines data from 10+ databases for system engineers, reducing manual cross-system lookups by 10+ hours per week.
- Wrote and optimized SQL queries to join, filter, and reconcile work orders, equipment status, training records, and system health data across multiple legacy databases.
- Built multiple internal applications to track equipment KPIs, performance targets, and historical trends for engineering reliability reviews.
- **Skills:** Python · Backend Development · MS App Tools · Control Systems · SQL · Project Planning · Collaboration

### Queen's VEX U Robotics Team

Kingston, ON

*Software and Electronics Project Lead*

*September 2022 – September 2024*

- Led a team of 5 in designing and implementing an Odometry PCB, improving robot navigation accuracy.
- Designed and implemented robot motion algorithms, improved camera processing, and developed a Jetson Nano PCB for enhanced visual recognition, contributing to a quarter-final finish at the VEX U Robotics Worlds.
- **Skills:** Project Management · Rust · KiCad · Motion Algorithms · Computer Vision · Teamwork · Robotics

### Ingenuity Labs Research Institute

Kingston, ON

*AI Research Associate*

*September 2023 – December 2023*

- Developed neural networks using real-life road accident data to identify patterns and improve road safety.
- Classified cyclist-related incidents with Python, uncovering key accident causes and providing insights for safety enhancements.
- **Skills:** Python · Excel · Machine Learning · Data Analysis · Research Collaboration · Road Safety

## PROJECTS

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### OmniCast - Interactive AI Podcast Platform

Kingston, ON

*1st Place, KingHacks Hackathon, \$500 Prize*

*January 2026*

- Built an interactive conversational knowledge platform that turns a query and supporting documents into live, interruptable podcast-style conversations with multi-host AI personas.
- Implemented RAG, conversation threading, and context persistence using Backboard.io, with ElevenLabs APIs powering low-latency text-to-speech output.

### GraphRAG for Clinical Guidelines

Kingston, ON

*CAPSTONE - AI Startup ALIRA*

*Sept 2025 – Present*

- Building a GraphRAG API for clinical guidelines, transforming large medical documents into a scalable knowledge graph for more accurate and cited context retrieval.
- Implementing a production-ready AI backend using Python, FastAPI, Neo4j, and AWS, with secure REST APIs, CI/CD pipelines, and evaluation against vector RAG using LLM-based metrics for an AI startup Alira.