

Niraa Rajalingam

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EDUCATION

University of Toronto

Toronto, ON

Bachelor of Applied Science: Computer Engineering | Minor Degrees: Artificial Intelligence, Business 2021 - 2026

- **Courses:** Computer System Programming, Computer Architecture, Computer Security, Operating Systems

EXPERIENCE

Software Engineering Intern

May 2025 - Aug 2025

Amazon AWS

Vancouver, BC

- Designed and launched an automated onboarding workflow using AWS services to define enterprise customer accounts and create support profiles across multiple regions and languages, cutting human error and reducing operational load by 7%.
- Refactored and modularized backend APIs with a three-layer architecture, introducing layer-specific exceptions and clear type separation to improve maintainability before transferring ownership to another team.
- Developed and maintained microservices with Java Spring Boot back ends and React/Redux front ends, achieving 98% unit test coverage, expanding integration tests, and implementing system metrics to enhance observability.

Software Developer Intern

May 2024 - Present

Modiface

Toronto, ON

- Developed and launched a new GenAI-powered full-stack application, providing personalized beauty advice and product recommendations to over 500,000 users.
- Developed RESTful APIs using Express and FastAPI to enable efficient interaction between front-end and back-end systems, implementing caching strategies that improved performance and reduced database calls by up to 35%.
- Designed conversation flows in the GenAI backend using Python, ensuring intuitive user experiences.

Full-Stack Developer

October 2024 - Present

Movira (Startup)

Toronto, ON

- Built Movira, a data-driven multi-tenant facility management platform (Next.js, PostgreSQL, Terraform on AWS), empowering 200+ employees across multiple facilities to optimize space utilization and program engagement.
- Led client discussions to capture requirements and developed technical design documentation, aligning stakeholders, and guiding implementation toward agreed-upon goals

Backend Developer

September 2023 - April 2024

AuToronto

Toronto, ON

- Designed and implemented a real-time lane-map association algorithm using OSM data and binary road masks to interpret lane lines, projecting a 70% improvement in localization accuracy for autonomous vehicles.

PROJECTS

TourGuidePro | C++, OpenGL, OpenStreetMap, Open Data APIs, OOP, Git

January 2023 - April 2023

- Developed tourist mapping software with trip planning, route planning, and real-time location information.
- Utilized OSM database to construct the map and third party APIs to retrieve reviews, crime, and weather data.
- Optimized performance through multithreading, asynchronous loading, caching, and tile-based loading techniques.

ParkSense | Python, PyTorch, Numpy, OpenCV, YOLOv8, Matplotlib, OpenAI API

January 2024 - April 2024

- Developed a deep learning-based program to extract, interpret, and display parking sign information, achieving 72% accuracy at a distance of 7 meters in complex scenarios with multiple signs in the frame.

AWARDS AND ACCOMPLISHMENTS

L'Oreal Hackathon | 1st Place Overall

December 2024

- Fine-tuned LLM models to replace legacy GenAI solutions, reducing costs by 50x to 800x and solving prompt-update challenges without accuracy loss.

UTEK (Coding Competition) | 2nd Place Overall

January 2023

- Developed efficient algorithms in C++ to solve complex problems during an 8-hour programming challenge.

TECHNICAL SKILLS

Languages/Technologies: Python, JavaScript/TypeScript, C++, Java, C, SQL, ROS, AWS