Aditya Rajeev (U.S. Citizen)

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Seeking a challenging internship that gives me exposure to cutting-edge industrial software development.

# **Experience**

## Research Assistant | Vector Institute and University Health Network

April 2024 - Present

- Working with Prof. Michael Brudno (University of Toronto)
- Engineered image segmentation software to annotate over 2000 images for training with PyTorch
- Developed AI models capable of detecting/segmenting tubes in X-rays with over 85% accuracy
- Employed generative AI techniques to in-paint segmented areas, removing tubes from images
- Honored to be the first undergraduate student to contribute to this lab

# Researcher | Pioneer Academics

**May 2022 – September 2022** 

- Worked with Prof. Anthony Hoffman (University of Notre Dame)
- Did independent research on the effects of quantum gate error on machine learning models
- Described by Professor Hoffman as "in the top three of undergraduate students that I have had in class or supervised in my research" (Full evaluation here: https://bit.ly/PioneerEvaluate)
- Paper and code available here: https://github.com/Steelcrawler/PioneerResearchCode

#### **Education**

University of Toronto (GPA: 3.97/4.0)

September 2023 - Fall 2026

Computer Science Specialist (Dean's List Scholar) | Focus Areas: Al and Computer Systems

Relevant Coursework (by Summer 2025): Data Structures/Algorithms (Python), Linear Programming, Software Design (Java), Systems Programming (C/Unix), Intro to Databases, Intro to Machine Learning

# **Notable Projects**

# DeepEmotion ML Developer (https://tinyurl.com/DeepEmotion)

• Developer for the DeepEmotion project with the UofT machine intelligence student team, working on developing machine learning algorithms for continuous fMRI classification

#### Aercoustics ML Developer (https://aercoustics.com/)

- Working to develop ML Algorithms for Aercoustics, a sound engineering company based in Toronto Citadel Invitational Terminal One Hackathon (https://github.com/Steelcrawler/CitadelHackathon)
- Selected by Citadel to develop an algorithm with a team to compete in the Terminal One game **UOFT Hacks** (<a href="https://github.com/Steelcrawler/UofTHacks11">https://github.com/Steelcrawler/UofTHacks11</a>)
  - Lead a team that used Cohere AI, Eleven Labs, and DALL-E to build an AI chatbot that mimicked cartoon characters. Utilized Azure and Heroku for backend development

## **Skills**

Python: Fluent, 3 years of experience, proficient with PyTorch, OpenCV, Diffusers, Flask, Qiskit

Java: Fluent, 4 years of experience, implemented applets

Linux/Slurm: Research experience with Linux to manage workspaces and Slurm to allocate resources

Machine Learning: Experience with image segmentation, diffusion models, transformers

Git/GitHub: Proficiency with use of Git for version control and GitHub

SQL/Excel: Working knowledge of SQL and Excel to manage and manipulate large databases