Nico Schiavone

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EDUCATION

University of Toronto, Department of Computer Science **Sept 2024 – Jan 2026**
M.Sc. Computer Science *Toronto, ON*
4.0/4.0 cGPA; Vector Institute Affiliate; Supervisors: Dr. Sheila McIlraith, Dr. Eldan Cohen

University of Alberta, Department of Electrical & Computer Eng. **Sept 2019 – May 2024**
B.Sc. Engineering Physics with a Mathematics Minor; 4.0/4.0 cGPA *Edmonton, AB*

Frameworks: Python, Java, PostgreSQL, JavaScript, TypeScript, React.js, HTML5, Abaqus, Git, GCP, PyTorch
Awards: NSERC Undergraduate Research Award x 3, Dean's Research Award, Most Outstanding ECE Research Award.

EXPERIENCE

Microsoft **June 2025 - Aug 2025**
Software Engineering Intern *Redmond, WA*
- Business & Industry Copilot team - incoming Summer 2025

Vector Institute & University of Toronto **Sept 2024 - Present**
Graduate Student Researcher *Toronto, ON*
- Research in generalist agents, cooperative AI, LLM agents and test-time scaling. 3 manuscripts in prep.

University of Alberta **Jan 2023 – June 2024**
Machine Learning Researcher *Remote*
- Designed an efficient **computer vision** algorithm in Python, utilizing a novel active learning algorithm that rivals state-of-the-art models while using 80% less annotation data, resulting in a **first author** conference paper, published at IEEE CAI 2024 and selected for **oral presentation** (top ~5% of accepted papers). (GitHub)
- Engineered algorithms using **reinforcement learning** and **NLP** with **large pretrained models** for data efficient classification based on adaptive image synthesis, resulting in another **first author** manuscript. (GitHub)

TELUS **Jan 2023 – Aug 2023**
Software Engineer Intern *Remote*
- Spearheaded the development of a **full stack** Python XML scripting tool for a 20+ person team to automatically correct errors between sets of files, reducing the time spent per file by 95%.
- Developed a **full stack** document extraction tool, decreasing time needed by 90+% for teams of 10+ people.

TRIUMF **May 2022 – Aug 2022**
Software Research & Development Intern *Vancouver, BC*
- Independently operated and maintained an entire **DAQ gantry** and laser test facility for the Hyper-K group.

PROJECTS

UNI-Scraper (GitHub) (Demo): Web scraping tool using Scrapy and Playwright in Python for easy viewing of the entire catalogue of UNIQLO. Front-end built for dynamic CSV display and filtering, including per-column search. Stack includes Python, Django, Supabase, PostgreSQL, TypeScript, and React.js.
Huginn - Autonomous Retrieval Drone (GitHub): Self-guided custom drone using computer vision for object detection, real-time classification, and a novel magnetic interface for object pickup. Made in Python using PyTorch, Mavlink, and ROS, with a front-end in JavaScript with BootStrap4.

PUBLICATIONS

N. Schiavone, X. Li (2024). *Reinforcement Learning with Generative Models for Compact Support Sets* (link)
N. Schiavone*, J. Wang*, S. Li, R. Zemp, X. Li (2024). *MyriadAL: Active Few Shot Learning for Histopathology*. [IEEE CAI 2024, **Oral Presentation**, (link)]