

Nico Schiavone

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EDUCATION

University of Toronto, Department of Computer Science

Sept 2024 – May 2026

M.Sc. Computer Science

Toronto, ON

Vector Institute Affiliate; Supervisor: Dr. Sheila McIlraith

University of Alberta, Department of Electrical & Computer Eng.

Sept 2019 – May 2024

B.Sc. Engineering Physics with a Mathematics Minor

Edmonton, AB

3.95/4.00 Cumulative GPA, First Class Standing

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

University of Alberta

Jan 2023 – June 2024

Machine Learning Researcher | Python, PyTorch

Edmonton, AB (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 Co-op | Python, Java, C++, SQL, GCP

Toronto, ON (Remote)

- Spearheaded the development of a **full stack** end-to-end 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%.
- Worked in an agile development environment, leading daily standups for a tools sub team of 6 people.
- Developed a **full stack** document extraction tool, increasing pipeline efficiency by 90+% for teams of 10+ people.
- Prototyped a revenue prediction data analysis planning tool deployed in GCP, reducing the time sink by 75%.
- Frequently presented final products to senior leadership in written and oral form.

TRIUMF

May 2022 – Aug 2022

Software Research & Development Co-op | C++, Python

Vancouver, BC

- Independently operated and maintained an entire **DAQ gantry** and laser test facility for the Hyper-K group.
- Designed a Raspberry-Pi based safety and monitoring system in Python for a sensitive test facility of 15+ people.
- Contributed high quality code to the existing TRIUMF codebase, used by 50+ researchers nationwide.

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](#))]