

## EDUCATION

### University of Toronto

Honours Bachelor of Science in Computer Science - Entrance Scholarship

Sep 2019 – Jun 2024

Mississauga, Ontario

- **Teaching Assistant:** Computer Programming, Computer Science, Theory of Computation, Computer Organization, Databases, Ethics in Computer Science

## EXPERIENCE

### Experiential Education Unit - University of Toronto

Graduate Research Assistant- UTM Co-op Internship Program (UTMCIP)

Sept 2024 – Present

Mississauga, Ontario

- Support the launch of the UTMCIIP by providing disciplinary expertise and assisting in the delivery and evaluation of Work-Readiness Modules.

### MEDCVR Lab - University of Toronto

Research Assistant- Medical Computer Vision & Robotics Lab

Jan 2024 – Present

Mississauga, Ontario

- Developing an internal application to analyze vocal fold movement in laryngoscopies using **OpenCV** and **SciPy**.
- Enabled automatic identification of larynx and trachea landmarks using HSV color masks a **DeepLabCut** model for landmark annotation.

### AIRY3D - Core Team

Computer Vision Software Engineering Intern

May 2024 – Nov 2024

Montreal, Quebec

- Researched and implemented SOTA outlier removal methods for captured point clouds in **C++**.
- Developed an ISP (Image Signalling Processor) pipeline in **C++** using **OpenCV**.

### Zillow

Software Development Engineering Intern - Rich Media Experiences (RMX) Team

May 2023 – Aug 2023

Remote

- Integrated Apple's **RoomPlan API** into the AR room capture app, streamlining a multi-step manual process into a single iPhone scan.
- Implemented **ARSession relocalization**, and 2D/3D floor plan generators with furniture.
- Delivered a comprehensive report to the RMX team, incorporating key WWDC23 updates for ongoing initiatives.

### Zillow

Zillow Engineering & Leadership (ZEAL) intern

Jun 2022 – Aug 2022

Remote

- Completed rotational projects with the Rental Revenue Platform (RRP), Premier Agent iOS Mobile (PA iOS), and Constellation Design System (CDS) teams, and participated in Zillow's annual Hackweek competition.
- **RRP Team:** Enhanced data handling efficiency by streamlining database access, using a Java Job Trigger to export **Parquet-format tables** to the **AWS Datalake**.
- **PA iOS Team:** Developed a contact details page for Real Estate agents using **UIKit** and **JSON** data parsing.
- **Hack-week Competition:** Team won **2<sup>nd</sup>** place in the Product Features & Business Ideas category, for which I modified **USDx** models using the **RoomPlan API**.
- **CDS Team:** Redesigned the Constellation documentation platform and improved navigation via an upgraded search UI with **React**, **GraphQL** and **Styled Components**.

### Tiary Inc.

Software Development Intern

Jun 2021 – Aug 2021

Toronto, Ontario

- Revamped web pages (Blog, FAQ, Checkout, Order Tracking) using **React** and developed Tiary Studios' info site with **JavaScript**, **Gatsby**, and **GraphQL**, improving site functionality and user experience.

### Microsoft

Intern

Jul 2019 – Aug 2019

Mississauga, Ontario

- Developed a **PowerApps** Inventory Management Platform with a team of 5, reducing marketing material request time and presenting it at Microsoft's National Annual General Meeting.

## PROJECTS

### Indoor Rock-Climbing Assistance Tool (IRCAT) | Python, OpenCV, YOLOv8

Sep 2023 – Present

- Won a **\$1500 research** grant and presented project at the 2024 UofT Summer Undergraduate Research Fair.

### Brain Tumor Classification Model | Python, TensorFlow

Sep 2023 – Dec 2023

- Won **1<sup>st</sup>** place at the UTMSU Undergraduate Research Symposium.

## SKILLS & COURSES

**Languages:** Spanish (Native), English (Fluent), French (DELF B1), Italian (Beginner)

**Developer Tools:** Python, C++, Swift, Deeplabcut, OpenCV, PyTorch, TensorFlow, YOLO, RoomPlan, React, Gatsby, Firebase, AWS, HTML, CSS, PostgreSQL, Figma

**Relevant Courses:** Image Understanding, Machine Learning, Neural Networks and Deep Learning, Medical Robotics, Mobile Robotics, Ethics for Computer Scientists.