

Rian Sen Majumder

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Education

McMaster University

B.Eng in Computer Engineering - GPA: 3.9/4.0

Hamilton, ON, CA

Expected Grad - 2028

Skills

Programming Languages: C, C++, Python, JavaScript, HTML/CSS

Tools and Frameworks: OpenCV, MediaPipe, TensorFlow, Keras, Kaggle, MobileNetV2, Arduino Uno, Microsoft Office/Excel

Design: Autodesk Inventor, AutoCAD, Prusaslicer, Fusion360

Projects

GreenGuide – Object Identifying Machine Learning Model

- Created and **trained** an ML **model** in Python that uses a device camera to identify and sort objects into various categories based on the object's material with **97%** accuracy, sorting them into compost, garbage, or recycling.
- Trained and fine-tuned a MobileNetV2 model to classify objects in real-time using OpenCV, Keras, Tensorflow, and Kaggle

Computer Vision Arduino Car - Bluetooth Arduino Car with CV Capabilities

- Designed and implemented a **computer vision** system in **Python** using a laptop camera and **OpenCV**, enabling object detection for a Bluetooth-controlled car.
- Utilized **MediaPipe** for **real-time** finger recognition and communicated gestures to **Arduino** via Serial library in **C++** for controls.

Predators and Prey - Arduino LCD Game

- Built an interactive game using **C++**, an **Arduino Uno** board, and an **electrical breadboard**, enabling the player to control an avatar on an LCD screen through hardware inputs.
- Utilized push buttons to receive player input and display it in real-time

Experience

IPEX — Technical Support Intern

May 2024 – Sep 2024

- Assisted in the setup, installation, and configuration of 15+ workstations, ensuring proper connectivity and functionality.
- Resolved issues with operating systems, printers, and network connectivity, improving workstation usage for 30+ employees.

BGC Canada — Summer Camp Leader

May 2023 – Sep 2023

- Led a summer camp for BGC Canada, overseeing 50+ children aged 4-8 daily.
- Adapted to handle conflicts, ensure safety on city-wide trips, and navigate various obstacles by forming close ties with co-workers and maintaining communication lines with parents.

5n2 Canada — Fundraising and Web Development Intern

May 2022 – Sep 2022

- Assisted in the planning and execution of fundraising events, contributing to an additional \$12,000 in overall fundraising revenue compared to the previous year.
- Created compelling multimedia content for social media platforms, resulting in a 180% growth in online engagement and brand awareness. Instagram – @5n2.ca.
- Provided technical support, and designed and launched new website features that enabled online donations and improved visual elements. <https://5n2.ca/>.

Toronto Pan Am Sports Center — Assistant Life Guard

Nov 2021 – Oct 2022

- Responded quickly and effectively to emergencies, administering first aid and CPR as needed, resulting in 0 fatalities during tenure
- Monitored pool chemistry levels and performed routine water quality tests to ensure compliance with health and safety standards

Activities and Certifications

5n2 Soup Kitchens — Food Preparation Volunteer

Jun 2018 - Present

- Prepared nutritious meals for 500+ individuals across 3 homeless shelters weekly starting from 6th grade and through high school.
- Received the opportunity to work as an intern at the 5n2 head office after volunteering at the soup kitchen for six years, allowing me to see how a non-profit functions, all the way from serving the underprivileged on the front lines to working in the office.

NLS, Bronze Cross Certification— National Lifeguarding Society

2015 - Apr 2023

- Received NLS, Bronze Cross and First Aid CPR-C Certifications in April of 2023 after 8+ years of competitive swimming at Red Torch.

Air Cadets Squadron 856— Flight Corporal

Aug 2018 - Oct 2023

- Learned military drills and ceremonial protocols, instructed others, and learned discipline and leadership skills from veterans and current and retired members of the Canadian Army for five years.