

# Rian Sen Majumder

📍 Toronto, ON, CA 📩 rian.senmajumder@gmail.com 📞 (647)-833-1738 💬 rian-sen 💬 semmajur 💬 rians.dev

## Education

### McMaster University

B.Eng in Computer Engineering, Minor in Business - GPA: 3.8/4.0

Hamilton, ON, CA

Expected Grad - 2028

## Skills

**Programming Languages:** C, C++, Python, HTML/CSS, JavaScript, TypeScript, SQL, MatLab, Simulink

**Libraries/Frameworks:** Flask, React, NextJS, Node.js, OpenCV, Pandas, Numpy, MediaPipe, Scikit-Learn, TensorFlow, Kaggle

**Tools/Design:** Git, GitHub, GitLab, Arduino, CMake, AutoCAD, Solidworks, Prusaslicer, Microsoft Office/Excel, MobileNetV2

## Experience

### Software Developer Intern, IPEX

May 2025 – Aug 2025

- Automated data analysis workflows with **Python** and **SQL**, streamlining reporting on production and quality metrics.
- Developed internal scripts using **matplotlib** to visualize engineering test data, making it easier for managers to make quick decisions.
- Queried and filtered data using **SQLite** to identify trends (e.g., defect rates by product line, throughput analysis).

### Digital Systems Sales Intern, Cogeco

Feb 2025 – May 2025

- Single-handedly generated over **\$1.06 million** in **ARR** within 4 months through high-performance direct-to-consumer (D2C) sales.
- Delivered technical product explanations in clear, accessible terms to a wide range of clients, adapting to handle objections, and develop persuasive messaging in real time, totaling **600+ closed** customers during term.

### Design Engineering Intern, IPEX

May 2024 – Aug 2024

- Used **AutoCAD** to model and tweak production layouts, helping visualize efficiency improvements.
- Automated **CAD scripting** tools to model production layouts (equipment, product flow, etc.) and support process optimization.

### Front-End Web Developer Intern, 5n2

Jun 2023 – Sep 2023

- Designed and developed a responsive web interface using **HTML**, **CSS**, **JavaScript**, and **React** for a hunger relief initiative.
- Integrated dynamic UI components using **Bootstrap/Tailwind** to improve user engagement and streamline donation workflows, contributing to an additional **\$12,000** in fundraising **revenue** compared to the previous year.
- Implemented version control with **Git/GitHub** to track features and collaborate with other interns.

## Projects

### PalmPilot - Computer Vision Hand Gesture Controlled Car

- 🔗
- Implemented a real-time **gesture recognition** pipeline in **C++ & Python** with **OpenCV** and **MediaPipe** to control an **Arduino Uno** based, Bluetooth enabled car with custom **3D-printed** components, applying ML object detection in an **embedded system**.
  - Programmed **Arduino** firmware to receive serial input and **control DC motors** via an **L298N driver**, enabling gesture navigation.

### Jitr - ADHD Diagnosing Regression Model

- 🔗
- Developed a Chrome extension training a **logistic regression** model on **ADHD research** datasets to detect behavioral patterns.
  - Tracked reaction time, path efficiency, and motion variability locally to generate real-time probability scores of ADHD-like signals.

### GreenGuide - Object Identifying Machine Learning Model

- 🔗
- Trained and fine-tuned a MobileNetV2 model to classify objects in real-time with **97%** accuracy using Kaggle, Python, OpenCV, etc.

### Personal Portfolio Website

- 🔗
- Used **JavaScript**, **TypeScript**, **React**, **NextJS**, **Node.js**, and **TailwindCSS** to create a dynamic website and deploy it on **Vercel**.

## Activities and Extracurriculars

### First-Year Council Chair, McMaster Engineering Society

Sep 2024 - Sep 2025

- Strategically managed and allocated a **\$20,000** annual budget across multiple academic and social engineering events.
- Represented and advocated for over **2,400** undergraduate engineering students, raising event participation by **40%+** year over year.
- Chaired all council meetings, coordinating logistics and managing a **team of 20+** volunteers, troubleshooting day-of issues to support student success and well-being.

### Coding Instructor, TDSB Community Services

Oct 2022 - Jun 2024

- Instructed students in **C**, **Python**, **JavaScript**, and web development fundamentals by delivering structured, hands-on lessons.
- Developed and implemented interactive coding exercises and pair-programming sessions, teaching concepts like **recursion** and basic data structures & algorithms through **project-based** learning.

### Lifeguard, Toronto Pan Am Centre

Nov 2022 - Jul 2023

- Received NL, Bronze Cross from the National Lifesaving Society in April of 2023 after 8+ years of competitive swimming.
- Responded quickly and effectively to emergencies, administering first aid and CPR as needed, resulting in 0 fatalities during tenure.