

Rian Sen Majumder

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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.

Jittr - 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