Vraj Prajapati

vrajip@gmail.com ❖ (647) 906-8725 ❖ in/vraj8725 ❖ gh:vproHacks ❖ Toronto, ON

EDUCATION

University of Toronto   **May, 2026**
B.ASc (Bachelors of Applied Science) Engineering Science   *Toronto, ON*
- Relevant courses: Digital and Computer Systems, Data Structures and Algorithms (100%), Intro to CS (99%)

EXPERIENCE

University of Toronto Machine Intelligence Student Team (UTMIST)   **September 2023 – Present**
Project Director   *Toronto, ON*
- **Founded** and leading Spiking Neural Networks project, highlighting **novel & efficient** approaches to AI.
- Creating **neuromorphic computing** hardware with **memristors** for spiking algorithms & **CNN** inference.
- **Directing a team** of 8 talented HWE developers and SWE developers on project with a **SCRUM** workflow

IEEE University of Toronto Student Branch   **May 2023 – Present**
Technical Director   *Toronto, ON*
- **Spearheading** a team of 13 associates in creating professional development initiatives for **embedded** engineers.
- **Mentoring** student projects, organizing hardware distribution at **Canada's Largest Makeathon**, MakeUofT.
- Hosting workshops with topics such as **eAI Quantization**, **Computer Vision**, Altium **PCB Design**, etc…

University of Toronto Robotics Association (UTRA)   **June 2023 – Present**
Executive Electrical Advisor   *Toronto, ON*
- Designed a **milestone-based** workflow with five **robot design** teams to hold **design reviews** with faculty
- Advising teams with **robotics design** decisions related to **odometry**, **mobile CV**, **localization**, **PID control**

University of Toronto Engineering Orientation (F!Rosh) Tech Team   **June 2023 – August 2023**
Full Stack Web Developer   *Remote*
- Used **MERN stack** to develop features for orientation.skule.ca such as **on-the-fly PDF generation**
- Demonstrated proficiency in working **asynchronously** with a team all over Canada using **git, docker, SCRUM**

University of Toronto Formula SAE   **February 2023 – May 2023**
Driverless Team - Embedded Engineer   *Toronto, ON*
- Worked with **SocketCAN** and **ROS2** to create features and code to drive FSAE Car in **driverless** competition

PROJECTS

Magnetic Accelerator   **MakeUofT 2023 - Best Use of Qualcomm 8450HDK**
- Created a magnetic coil gun by applying fundamental **electromagnetics** with a team, and I leveraged the **DSP and eAI platform** of the Snapdragon 8450 to **efficiently detect** lifeless objects for the **targeting system**.

Pepsi Turret   **IEEE 2023 Internal Summer Project**
- To highlight my **deep hatred** of Pepsi I created an **accelerated obj detection algorithm** on an RPi, designed a double flywheel system, and an **actuating 2-axis turret** base to detect pepsi cans and fire marbles at them.

SKILLS

Programming in C, C++, Python, Java, JS, Verilog
Collaborative Leadership, Mentorship, Teaching
Engineering AI, Robotics, Microcontrollers, Web

ACHIEVEMENTS

Qualified for 2022 World **FIRST** Robotics Competitions
NASA Space Apps 2023 - International Qualifier

CERTIFICATES & COURSES

Imperial College London - Mathematics for ML
Stanford - CS229: Machine Learning

INTERESTS

Making funny robots, Cooking, Going to the gym, Table Tennis, Punny Puns, Cheddar Broccoli Soup