

Utsharga Rozario

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GitHub: <https://github.com/Utsharga>

Education

McMaster University

Bachelor of Engineering: Software Engineering GPA: 3.3/4.0

Hamilton, Ontario

August 2018 – April 2023

Work Experience

LexiValley Inc. – McMaster Innovation Park

Hamilton, Ontario

Software Engineering Intern

January 2020 - Present

- Working with software engineering undergraduate and graduates to create an interface for a car tracking device provided by the Innovation Factory.
- Developing the UI along with the algorithm for the project using **React.js** on the front-end and **Python** and **Node.js** on the back-end
- Tools being used: **GitHub** for version control, Google Maps **API**, **React.js**, **CSS**, **HTML** and **Python**

Technical Experience

McMaster Mars Rover - Faculty of Engineering, McMaster University

Hamilton, Ontario

Software Team – Communications Programmer

September 2019 - Present

- Working with software engineering students to create a communications program customized to run on the Nvidia Jetson with coherent computation with the antenna dish
- Formalized the communications program from a rudimentary module for a custom-made antenna to a program for the current upgraded model, making signal range increase by 20% (~10 meters)
- Tools being used: **ROS**, **Python**, **C++**, **Ubuntu** and Nvidia Jetson as the processing unit

McMaster Eco Car Challenge - Faculty of Engineering, McMaster University

Hamilton, Ontario

Connected and Automated Vehicles System (CAVs) Team – Human Machine Interface Programmer

September 2019 - Present

- Working with a multitude of different engineering students to program a Human Machine Interface for the User
- A raspberry pi 3+ is being used as an intermediate processing unit to take data from the CAVs interface and display it on the touch screen provided to the user.
- Tools being used: **MATLAB**, **Python**, **Linux**

Extra-Curricular Involvement

DeltaHacks - Faculty of Engineering, McMaster University

Hamilton, Ontario

Executive Member, Sponsorship

October 2019 - Present

- Worked with a cross-functional executive team (5 members) to obtain funding from 20 sponsorship sources of \$105,000, yielding a year-over-year, 31% increase in funds, a 25% surge in company interest and a 12% improvement in sponsor retention
- Helped formalize a comprehensive design of the sponsorship packaging strategy, that amplified our offered opportunities by illustrating quantified statistics of our event, highlighting popular and attractive perks, and offering the freedom of customization to suit the companies needs
- Created and helped manage the 'Campus Ambassador' program across North American universities, which successfully increased the number of conference applicants by 15% (~2,100) within 5 months
- Negotiated with sponsors, by utilizing year-over-year metrics, to create compelling statistical analysis, resulting in a 12% increase in funding

Projects

Car and Lane Detection System

<https://github.com/Utsharga/Cars-Detection-System>

- The car detecting program compares stored expected car shapes and sizes to the input feed to determine cars
- The lane detecting program utilizes OpenCV to detect difference in gradient, curvature and frequency of lane lines to determine lanes

Building Blocks

<https://github.com/Utsharga/Assembly-programming>

- Built an interactive command line program on assembly using bash scripting
- Utilized aspects of Software Development Skills course to implement this program

Achievements

- McMaster Entrance Scholarship: \$1000 for high school grades 90% to 95%.
- Dean's Honor List: For Student with above a 3.60 GPA

August 2018

January 2019 and August 2019

Skills

- Experience working** with Python, C, C++, VB .net, Java, JavaScript, HTML, CSS, Bash scripting and MATLAB
- Tools and Technologies:** OpenCV, React.js, Node.js, jQuery, Git, GitHub and Google Cloud
- Interpersonal Skills:** Leadership, Team Management, Communication