

# Utsharga Rozario

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

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## Education

### McMaster University

Bachelor of Engineering: Software Engineering GPA: 3.3/4.0

Hamilton, Ontario  
August 2018 – April 2023

## Technical Experience

### McMaster Mars Rover - Faculty of Engineering, McMaster University

Software Team – Communications Programmer

Hamilton, Ontario  
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

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

Hamilton, Ontario  
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

Executive Member, Sponsorship

Hamilton, Ontario  
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

### Personal Site: [utshargarozario.com](https://www.utshargarozario.com)

<https://github.com/Utsharga/Personal-Site>

- Utilized **HTML, CSS** and **JavaScript** to create a reactive website to optimize a way to share all my experiences and projects
- Hosted on Netlify and used **php** for contact form

## Achievements

- McMaster Entrance Scholarship: \$1000 for high school grades 90% to 95%. August 2018
- Dean's Honor List: For Student with above a 3.60 GPA 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, Django, Flask, Angular, jQuery, Git, GitHub and Google Cloud
- **Interpersonal Skills:** Leadership, Team Management, Communication