

Harsh Patel

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Toronto, Canada

EXPERIENCE

Software Developer

May 2021 - Aug 2021

York University : VGR Laboratory

Python, C++, XML, Bash, Gazebo 3D simulator, ROS Noetic.

- Developed and deployed a GPS based autonomous navigation system for ASVs (Autonomous Surface Vessel) to monitor invasive aquatic plant species such as Eurasian Watermilfoil in lakes across Ontario.
- Used OpenStreetMaps API to create Gazebo environments of Farlain lake. Support for GPS navigation and sonar data collection was developed into the environment for accurate real world simulation for ASV testing and development.

Python Developer

May 2020 - Aug 2020

York University : SDCN Laboratory

Python, Bash, Gazebo 3D simulator, ROS Kinetic.

- Designed and developed vision based localization and navigation method for unmanned vehicles in an indoor GPS deprived environment.
- Created a multi agent system with Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicles (UGVs). Where the UGVs are able to guide the multiple UAVs while traveling from one point to another.
- Increased localization and navigation accuracy by incorporating a machine learning library called Gmapping into the multi agent system.

PROJECTS

Tic Tac Toe A.I. App — Java, Android Studio

- Applied the concept of Finite automatas along with rule based strategy to come up with an algorithm which lets the computer make its own decisions, when playing against the user. Published on Playstore.

Non-Invasive Reconnaissance — Scapy, Python

- A Scapy script which will allow the user to do non-invasive reconnaissance on a list of remote networked devices on the internet. Obtained data is crucial to perform network penetration attacks.

Portfolio — JavaScript, CSS, HTML

- Created a responsive website that uses multiple libraries available online for special effects. Such as Bootstrap and Fake loader.

LINKS



harshdev.netlify.app/



github.com/Harsh-B-Patel



linkedin.com/in/harsh1212/

LANGUAGES

Java

Python

C/C++

SQL

Javascript

Bash Scripting

Tools:

Git/Github

Linux

JUnit Testing

Software development life cycle

EDUCATION

York University

Hons BSc. Computer Science

GPA: 3.5/4.0

2017 – 2021

AWARDS

Lassonde Undergraduate

Research Award (2021) **-\$10000**

Lassonde Undergraduate

Research Award (2020) **-\$8000**

GM Bursary for Students in

Computer Science (2019) **-\$3500**

Student Life Award (2018) &

Entrance Scholarship **-\$1000**