Harsh Patel

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***Portfolio*: https://harsh-b-patel.github.io/Portfolio/**

EXPERIENCE

Software Developer
May 2021 - Aug 2021

York University : *VGR Laboratory*

- Developed a GPS based mapping algorithm for navigation of autonomous boats for data collection to monitor invasive plant species in lakes.
- Created Gazebo 3D simulation of lakes using OpenStreetMap, which support GPS navigation and sonar data collection for accurate real world simulation.

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

Software Developer
May 2020 - Aug 2020

York University : *SDCN Laboratory*

- 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.

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

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 — *Scrapy, Python*

- A Scapy script which will allow the user to do non-invasive reconnaissance on a list of remote networked devices on the internet.

Portfolio — *JavaScript, CSS, HTML*

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

PROGRAMMING SKILLS

Java ●●●●●
Python ●●●●
C/C++ ●●●●
SQL ●●●●
Javascript ●●●●
Git ●●●●
JUnit Testing ●●●●
MS OfficeSuite ●●●●

EDUCATION

York University
Hons BSc. Computer Science
GPA: 3.6
2017 – 2021

ACHIEVEMENTS

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