JAINISH MEHTA

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LinkedIn GitHub Website

SKILLS

- ***Languages/ Frameworks/DBs:*** C++, C, Java, Python, Javascript / Typescript (intermediate), Matlab, R, HTML, CSS, Selenium, MySQL
- ***Other:*** Git, Docker, GTest, AWS, Node.js, JUnit, RMarkdown, Latex, Postman, Jenkins, Micro Focus UFT, Jira, Linux Ubuntu
- Data Analysis
- SolidWorks, AutoCAD, GD&T
- Knowledge of PLC and Microprocessors
- Rapid Prototyping, Laser-Cutting, Machining
- ***1000+*** volunteer hours over 5.5 years, solidifying my leadership, problem – solving & project management skills

AWARDS

- 3rd Place, Canada Chemistry Contest (Alberta/NWT)
- 2nd Place, 2018 Interdisciplinary Science Competition
- 2nd place team in Canada, CyberPatriot X Security Competition (placed top 2% worldwide)

EDUCATION

Candidate for BASc in Honours Mechatronics Engineering, Option: AI

University of Waterloo

Sept. 2018 – Apr. 2023

RELEVANT EXPERIENCES

Full Stack Software Developer (Cybersecurity), Red Canari Inc. *Aug 2020-present*

- Created a web application and chrome extension using ***HTML***, ***CSS***, and ***React.JS.*** Used ***AWS*** for backend services and creating ***RESTful APIs***; specifically used AWS Lambda, AWS Cognito for user authentication, and the AWS Amplify framework. Serverless application served as email proxy to mask original emails with shadowed ones.

DevOps/Quality Services Software Engineer, Manulife Financial *Jan – Apr 2020*

- Used ***Java*** and ***JUnit*** to develop new features, enhancements in test reports to improve user experience, and health checks for ALM and DevTest. Setup ***Jenkins*** pipelines for existing projects.
- Integrated ***Perfecto*** platform within existing ***Selenium*** framework (TestNG and Cucumber) to fully automate an efficient mobile app and mobile browser testing process.
- Used ***Postman*** to parse information on Perfecto statistics and ***SQL*** to query these statistics in order to visualize it on Grafana.

Robotics/Software Engineer, Mission Control Space Services Inc. *May – Aug 2019*

- Developed functions and unit and integration tests in C++ (primarily) and Typescript to enhance a ***path planning algorithm***; these include creating one for cubic spline interpolation, using XML and data parsing to classify terrain classes, and getting ROS nodes to subscribe LiDAR point cloud data.
- Used linear algebra to analyse sensor data from an IMU and stereo camera and then implemented a graph in C++, through nodes, in order to develop a ***calibration routine*** that determines the tilt of the stereo camera mounted on a rover.
- Formulated system design documentation for the navigation & control subsystems of a lunar rover, including ***sensor fusion research*** and modelling camera specifications, such as field-of-views.

Waterloop Mechanical & Embedded Software Team *Jan 2019 – Present*

- Modelled parts of the braking system and battery enclosure for the Hyperloop using Solidworks.
- Worked with team members to read and interpret message outputs from RobotEq motor controller. Used ***C*** to create an Arduino program to interpret signals for a ***rotary encoder.***

SIDE PROJECTS

Movie Recommendation System *May 2020*

- Created a simple movie recommendation program using ***Python*** and skicit-learn library. Used vector analysis based on select features to find similarities between two objects.

SmartVision: Object Recognition (Mostly Frontend) *Sept 2019*

- Used ***Swift*** to develop the user interface for a prototype iOS app which aimed to help impaired individuals distinguish their surroundings. Aided in incorporating a CoreML model for Apple's Vision framework to enable computer vision functionality.

Thrifter: Finding an Optimal Match Between Images *Feb 2019*

- Worked with a team to design parts of frontend and backend for a web application that incentivizes users to thrift shop by finding a match between a database of business-side clothing and an uploaded user's image; used ***HTML, CSS,*** and ***Javascript***, specifically jQuery to make API requests.
- Utilized Google Cloud Platform Vision API for ***computer vision*** functionality, a MongoDB database to store images, and ***K-nearest neighbours algorithm*** to find an optimal match between two images.

Aktiv: Typing Robot *Oct – Nov 2018*

- Automated a typing Lego Mindstorms EV3 robot using ***C++ and RobotC***, which takes text files as user input. A computer keyboard was mapped using hash tables.
- Employed PID controllers and rack and pinion models to increase robot's typing accuracy.