Prakhar Garg

www.prakhargarg.ca
prakahr@live.ca
416-939-5141

Highlights

- Over 12 years of project experience in engineering design, production and testing.
- Currently researching pattern of life extraction algorithms at the Estimation Tracking and Fusion Lab.
- 3 years of industry experience at multinational defense companies.

Education

Master of Applied Science, Electrical and Computer Engineering **expected completion 2021**
McMaster University, Hamilton, ON

- Studied Estimation Tracking and Fusion (ETF) Lab under Dr. T. Kirubarajan.
- Researched pattern of life extraction and anomaly detection algorithms using Machine Learning.
- Relevant courses: State Estimation (Kalman Filter), Optimization, Multitarget Tracking & Sensor Fusion

Bachelor of Engineering and Management, Mechatronics **Class of 2018**
McMaster University, Hamilton, ON

- Relevant courses: Operating systems, Robotics, Product Development, parallel computing.

Work Experience

L3Harris WESCAM **Algorithm Developer** **2020-2021**

- Assisted WESCAM's Independent Stabilized Sighting Systems (MX-GCS) team develop new features for upcoming electro-optic and infrared vision system offerings.
- Reduced time spent gathering field imagery by developing radiometrically realistic synthetic data generator to create pseudo-realistic scenes.
- Developed core target detection algorithm using computer vision, machine learning, and pixel-wise image processing.

THALES Canada **Software Analyst Intern** **2016 – 2017**

- Assisted in development of THALES' ambition project to reduce system testing time by over 80%.
- Debugged C++ based full system regression testing software.
- Implemented Jenkins and SonarQube for automated code check for software teams.
- Implemented standards for hardware configurations to run the appropriate software.
- Developed the front end and back end of a web-based tool to provide a user-friendly interface for automated tests.

Project Experience

McMaster Capstone **Design, Manufacturing and System Integration** **2017-2018**

- Created a smart, semi-autonomous, medical walker that autonomously drives itself to and from a docking station at the user's request.
- Designed and manufactured mechanical components to retrofit a walker with motors and actuators.
- Conduct stress tests on Autodesk Inventor to ensure mechanical safety and reliability.
- Develop software and electrical system requirements.
- Determine the ideal method to decentralize computation using multiple microcontrollers on walker.

Software Skills

Pascal	Node.JS	DOORS	MATLAB
Python	MongoDB	ClearCase	Simulink
C, C++	TensorFlow	ClearQuest	NI MultiSim
Java		Jenkins	LabVIEW
Assembly	Kinetic ROS	SonarQube	

Mechanical Skills

NX	Virtual Wind Tunnel
SolidWorks	
AutoCAD	Master CAM
Autodesk Inventor	Fusion 360

Projects

Hyperloop	Hack IT MAC
EcoCAR3	Quadcopter
SumoBot	CAD
	FIRST Robotics