

Bhavishey Thapar

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EDUCATION

UNIVERSITY OF TORONTO

AEROSPACE ENGINEERING

(ROBOTICS)

2023 | MEng.

RYERSON UNIVERSITY

COMPUTER ENGINEERING (AI)

2023 | MEng.

UNIVERSITY OF WATERLOO

MECHATRONICS ENGINEERING

2019 | BSc.

SKILLS

- C/C++
- Python
- ROS
- Matlab/Simulink
- SQL
- Fusion 360
- Linux
- Microcontrollers
- Autodesk Eagle
- Raspberry Pi

COURSEWORK

GRADUATE

Neural Networks

Development Of UAVs

Advanced Data Engineering

State Estimation

Computer Vision

Mobile Robotics

UNDERGRADUATE

Autonomous Vehicles

Multivariable Controls

Digital Controls

Introduction to Controls

Power Electronics

Image Processing

MEMS

AWARDS

General Motors Design Seed Fund

Magna New Mobility Award

INTERESTS

Tennis

Reading

Volleyball

RELEVANT EXPERIENCE

MDA | MISSIONS OPERATIONS INTERN (AI TEAM)

May 2022 - August 2022 | Brampton, ON

- Developed Machine Learning algorithms to automatically detect motor issues on CanadaArm2 aboard the International Space Station (ISS).
- Used Python with TensorFlow/Keras to develop an LSTM network.

GEOTAB | AUTOMOTIVE SUPPORT ENGINEER

July 2019 - June 2021 | Oakville, ON

- Leveraged Big Data and API's to create Python Notebooks enabling support engineers and customers to find quick resolutions related to product issues.
- Responsible for creating technical documentation as Subject Matter Expert (SME) for company wide automotive and gateway related queries.

PARAGON SYSTEMS | MECHATRONICS ENGINEERING INTERN

Sept 2017 - Dec 2017 | Concord, ON

- Part of an award-winning team of interns for successfully building and delivering automated end of line testing machines for Brose in Michigan.
- Fabricated and installed structural, pneumatic and electric systems on power seat assembly testers for Daimler AG, Ford and Volvo.

HONDA MANUFACTURING | MECHATRONICS ENGINEERING INTERN

Jan 2017 - April 2017 | Alliston, ON

- Awarded a Kaizen for creating a hand tool to help assembly workers solve problems related to door manufacturing.

BOLTON RAILINGS INC. | MECHATRONICS ENGINEERING INTERN

Jan 2017 - April 2017 | Alliston, ON

- Created shop drawings of stair and railing parts for the carpenters using Compass, a CNC compatible software geared towards designing stairs.

A&C TOOL INC. | MECHANICAL ENGINEERING INTERN

Jan 2014 - April 2014 | Bowmanville, ON

- Worked as the primary drafting engineer to model and draft steel fabrication projects such as Lifting Beam, Tilt Chute using Autodesk Inventor.

ADDITIONAL EXPERIENCE

UNIVERSITY OF TORONTO AEROSPACE TEAM | AVIONICS TEAM

Sept 2021 - Present | Toronto, ON

- Working towards developing a system for a fixed wing UAV to detect landing zones using object detection algorithms running on a stereo camera with the goal of successfully landing the UAV on the landing zone.

ROBOT ARM CONTROLLER

January 2019 - April 2019 | Waterloo, ON

- Designed a feedback controller in MATLAB for a non-linear two link robot arm MIMO system using a Kalman filter as the state estimator.

AUTONOMOUS UNDERWATER VEHICLE

January 2018 - March 2018 | Waterloo, ON

- Designed and built an underwater ROV capable of guiding through underwater obstacles and were placed 2nd in the competition.