

Bhavishey Thapar

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WORK EXPERIENCE

AI Developer Intern

MDA

May 2022 - August 2022

Brampton, ON

- Developed a predictive maintenance system using LSTM deep learning networks to automatically detect anomalies on CanadaArm2 aboard the International Space Station with upwards of 80% accuracy
- Designed neural networks to implement an anomaly detection system, improving system accuracy to provide results in 1/10th of the time compared to the existing system, resulting in early detection of failures
- Integrated AI solutions into the current workflow to improve productivity and system robustness, using Python, MATLAB, and other frameworks such as PyTorch, TensorFlow, Keras, Pandas and NumPy

Software Support Engineer

Geotab

July 2019 - July 2021

Oakville, ON

- Created interactive dashboards and Python notebooks using big data, for quicker troubleshooting of existing software bugs and testing of new features, leading to a significant improvement in the development process
- Maintained detailed records of over 100+ weekly customer interactions and problem resolutions, created and updated documentation and knowledge base articles resulting in 50% decrease in customer queries

Mechatronics Engineering Intern

Honda of Canada

January 2017 - April 2017

Alliston, ON

- Collaborated with a team of over 4 engineers to implement a comprehensive quality management system by identifying areas of improvement, resulting in a 5% reduction in downtime while enhancing product quality
- Received a Kaizen award for designing, building, and machining a tool to assist workers in resolving issues related to door manufacturing, resulting in increased productivity on the assembly line

PROJECTS

Research on Drone Swarms

University of Toronto Robotics Institute

January 2023 - April 2023

Toronto, ON

- Implemented algorithms for motion-planning of multiple drones using Robot Operating System (ROS)
- Tested and evaluated path planning, perception and control algorithms with the help of Vicon motion capture cameras for autonomous decision-making and coordinated communication among quadrotor UAVs

EDUCATION

Master of Engineering (Robotics)

University of Toronto

September 2021 - April 2023

Courses: Motion Planning, Autonomous Mobile Robots, State Estimation, Deep Learning, Neural Networks

Bachelor of Applied Science (Mechatronics)

University of Waterloo

September 2014 - April 2019

Courses: Multivariable Controls, Digital Control Systems, Signal & Systems, Data Structures, C Programming
Awards: General Motors Capstone Design Fund (\$2500), Magna New Mobility Award (\$2000)

SKILLS

Programming

Python, MATLAB, Simulink, C, C++, Git, SQL, Java, Markdown

Frameworks

Hadoop, Spark, PyTorch, Tensorflow, ROS, OpenCV, Pandas, NumPy

Other

Github, Linux, Google Cloud Platform, Blockchain, Microsoft Office