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Bhavishey Thapar

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Work Experience

AI Developer Intern **May 2022 - August 2022**
MDA *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 **July 2019 - July 2021**
Geotab *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 **January 2017 - April 2017**
Honda of Canada *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 **January 2023 - April 2023**
University of Toronto Robotics Institute *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) **September 2021 - April 2023**
University of Toronto

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

Bachelor of Applied Science (Mechatronics) **September 2014 - April 2019**
University of Waterloo

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

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