Abdulla Alshehhi

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Education

Boston University, Boston, MA **Expected Graduation: Dec 2024**
Master of Science in Robotics and Autonomous Systems

GPA: Major: 3.8/4.0 , Cumulative: 3.8/4.0

Relevant Coursework: Medical Robotics, Robot Vision Planning and Control, Additive Manufacturing.

Awards & Honors: Boston University College of Engineering Dean's Scholarship

Northeastern University, Boston, MA **Degree Completed: Dec 2023**
Bachelor of Science in Computer Engineering

GPA: Major: 3.9/4.0 , Cumulative: 3.6/4.0

Relevant Coursework: Robotics, Cybersecurity, Rapid Prototyping, Product Development, Embedded Design, Digital Design, Computer Science, Biomedical Applications, Research

Awards & Honors: Dean's List, Certificate of Excellence in ECE, Gordon Undergraduate Engineering Leadership Bootcamp.

Experience

Robomorphic Computing Laboratory, Boston University **Boston, MA**
Project Lead, Mars Rover Computation Optimization July 2024 -

- Reverse-engineered full navigation stack aboard NASA's Perseverance Rover
- Rebuilt NASA rover's algorithms in C++ and ROS
- Developed modular testbed to benchmark algorithmic enhancements
- Studied and proposed computational enhancements and optimizations

Institute for Experiential Robotics, Northeastern University **Boston, MA**
Robotics Researcher Jan 2023 - Dec 2023

- Created robotic system and components using Fusion360.
- Developed custom hardware drivers for RGB-D cameras, motors, pumps, and valves.
- Integrated systems through ROS and RL algorithms.

Institute for Experiential Robotics, Northeastern University **Boston, MA**
Robotics co-op Jul 2022 - Dec 2022

- Implemented robots in ROS using C++ and Python.
- Built ROS-based robots, including sensor integration, mechanical CAD design, software, and testing.
- Programmed RGB-D vision systems for object recognition and synchronization.
- Proposed and designed a framework for automated lab equipment maintenance reminders.
- Developed, launched, and integrated a safety system that managed and controlled access to machinery.
- Trained staff members on the safe operation of laser cutting and fabrication equipment.

SharkNinja Robotics **Needham, MA**
Robotics co-op Sep 2021 - Dec 2021

- Designed and developed prototypes to enhance the Shark AI Robot Vacuum.
- Implemented efficiency and design improvements based on hardware and software tests.
- Enhanced engineering workflow by setting up a prototype tracking system.

Skills

Programming: ROS, C++, Python, Arduino, MATLAB, MIPS, VERILOG, Reinforcement Learning, Machine Learning, Computer Vision, SLAM, MoveIt, OpenCV
Engineering: Microcontrollers, Embedded Systems, 3D Printing, Laser Cutting, Fabrication, CAD (Solidworks, Fusion360), Soldering, PCB Design, Electrical Circuit Analysis, Signal Analysis, UART, I2C
General: Git, Linux (Ubuntu, Arch), Unit testing, Jira, Microsoft Office, Adobe InDesign, Adobe Photoshop, DFMEA, Computer Networks
Languages: English, Arabic