Gowresh Rajagopal

ROBOTICS ENGINEER

CAREER SUMMARY

I am a robotics engineer who's knowledgeable in Autonomous Mobile Robots and Autonomous Vehicles with 5 years of experience in Full-Stack ROS/ROS2

WORK EXPERIENCE

Lead Technologist - Autonomous Mobile Robots

Maxbyte Technologies, UAE | Sep 2022 - present

- Design, Develop and Integrate Autonomous Mobility Platform for Industrial Vehicles
- Integrate and Deploy Autonomous Mobile Robots for Shopfloor Environments

Robotics Engineer

Maxbyte Technologies, India | May 2018 - Aug 2022

- Successfully developed and demonstrated a functional mobile robot platform as a proof-of-concept for material movement
- Integrated EEG based BCI (Brain Computer Interface) with a mobile robot to achieve teleoperation of mobile robots through brain signals
- Enabled collision-free material movement of axles in a construction equipemnt manufacturing plant through Autonomous Pallet Truck
- Increased the revenue generated by Autonomous Mobile Robots by enabling Blockchain based Transaction Model that carries wallet-to-wallet transaction based on the operations executed by AMRs (Autonomous Mobile Robots)
- Enabled a leading automotive manufacturing plant supervisor to perform remote monitoring of factory operations during Covid-19 pandemic through AR(Augmented Reality) based remote teleoperation of AMR
- Ensured user acceptance of Autonomous Pallet Truck by installing, debugging and validating a ROS based Autonomous Pallet Truck in a Wind Turbine Assembly Plant
- Increased user experience of AMRs by designing, developing and integrating Web Applications to interact with AMRs
- During Covid-19 pandemic, assisted a healthcare providing organisation to safeguard frontline workers by enabling Autonomous Disinfection of Hospital environments through AMRs
- Achieved maximum efficiency of Autonomous Cleaning Vehicles by optimizing the cleaning path patterns and enabling continuous monitoring of the cleaned path
- Achieved simple re-usability of source code by dockerising high-level ROS Algorithms in a container
- Minimized the field installation time and success ratio of Autonomous Mobile Robots by developing one modular framework that supports a wide range of robot platforms
- Pitched a proposal deck for a modular hardware-software platform that converts any manual electric vehicle into an autonomous vehicle

PREVIOUS SCHOOLS

Heriot-Watt Univeristy

Master of Science | Sep 2022 - Sep 2023

- Master in Robotics
- Created a search-and-rescue robot for identifying injured workers in hazardous environments
- Created a MLP model and a reward-based learning model for an epuck robot to navigate a T-Maze environment
- Conducted an postgraduate thesis on real-time pedestrian-collision avoidance strategy for Autonomous Vehicles

PSG College of Technology

Bachelor of Engineering | Jun 2014 - May 2018

- BE Production Engineering
- Conducted an undergraduate thesis on controlling a pneumatic robot arm with EEG brain signals

PROFESSIONAL SKILLS

- Mobile Robots Navigation Stack
- Mobile Robot Kinematics, Dynamics and Control
- Installation and Debugging of AMRs
- ROS/ROS2, Autoware, ReactJS
- Docker Containerizing
- Matlab Robot amd Image Tool Box
- Mobile Robot System Design
- Systems Analysis and Evaluation
- Machine Learning and Artificial Intelligence
- Gazebo, VREP, Webots Simulation
- Computer Programming - Python, C/C++, JS, HTML, CSS
- Git Version Control

LANGUAGES

- English
- Tamil
- Telugu
- German

CHARACTER REFERENCES

Dr. Nidhal Abdulaziz
Associate Professor, Heriot-Watt
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