Mohammad Ibrahim memon

immemon1811@gmail.com +49 15774001726 18/11/1998
linkedin.com/in/ibrahimmemon18 Indian

Professional Experience

05/2024 – 08/2024
Stuttgart, Germany

Research Assistant Gmbh, *Kelo Robotics*
- Simulation setup.
- Researched different types of systems and simulations.

06/2022 – 07/2023
Pune, India

Robotics System Engineer - Integration and validation, *Unbox Robotics Pvt.Ltd*
- Build **test frameworks** to test developed features/fix bugs.
- Perform **root cause analysis** on the failure of development.
- Debugging & Resolving site issues and report generation.
- Executed **DFMEA** (Design Failure Mode and Effect Analysis) to enhance system reliability and reduce potential failure risks.
- Programmed and automated testing tools, improving feature validation
- Testing and Integration of control boards and mechanical setups.
- Collaborated with development teams to identify and resolve integration challenges.
- Led system runs, robot deployment, on-site support, and customer demos.

03/2021 – 02/2022
Ahmedabad, India

Embedded System Engineer, *DashDot Robotics Pvt.Ltd*
- Designed and prototyped hardware systems from scratch, ensuring optimal functionality and performance.
- Conducted circuit troubleshooting and root cause analysis (RCA) to resolve technical issues effectively.
- Developed firmware at the integration level, incorporating and calibrating various sensors for seamless operation.
- Mentored interns by guiding their project development, setting clear responsibilities, and fostering technical growth.

Skills

ROS/ROS2

Git

Test Framework Development

Circuit Troubleshooting

Micro-controllers/Microprocessors

Control Boards Integration

C++/Python

Hardware Prototyping

Robot Deployment

Sensor Integration

Microsoft office

Prototyping Tools (EagleCAD, Canva)

Matlab

Root Cause Analysis

System Integration

Performance Testing

Robotic Simulation (Gazebo, Issac Sim)

Software-Hardware Integration

Circuit Designing/ Eagle Cad

DFMEA

Error Debugging

Firmware Development

Simulation Setup

Projects

Multi-Robot Task Distribution

- Multi-robot task Distribution is a scalable and efficient system for distributing tasks among a fleet of autonomous robots in various environments and simulations.
- The robots aim to collaborate and fulfil the tasks of picking up parcels from multiple locations and collecting them into one place in the Gazebo environment.

Autonomous Mobile Robot Development, *AMR*

- Utilized ROS for software integration with hardware components, including Raspberry Pi, Arduino, 2D-LiDAR, 3D camera, IMU, and encoded motors.
- Led the project, developed the software stack for component integration, and designed the circuit, motherboard, and power supply.
- Tools & Technologies: ROS, Raspberry Pi, Arduino, LiDAR, 3D Camera (Kinect Xbox), Linux, EagleCAD, Canva, MS Office.

Underwater ROV

- **Awarded a Top 5 Innovative Proposal Award**, securing **government funding** for robotics research and development.
- **Designed and built** an **underwater robot**, leading **end-to-end in-house manufacturing** of the thruster and electronic control system (ECS).
- **Led a team of 5 engineers**, facilitating cross-functional communication with mentors, academic institutions, and project stakeholders.
- **Developed a custom Electronic Control System (ECS)** with **bi-directional functionality** using **DPDT relays**, improving system adaptability and response time.

Education

09/2023 – present
Sankt Augustin, Germany

Msc. Autonomous Systems, *University of Applied Sciences Bonn-Rhein-Sieg*
Master of Science

07/2018 – 06/2022
Mehsana, India

Mechatronics Engineering, *Ganpat University*
Bachelor of Technology

Certificates

ROS for Beginners: Basics, Motion, and OpenCV, *Udemy*

ROS for Beginners II: Localization, Navigation and SLAM, *Udemy*

Languages

English — C2

German — A1

Mohammad Ibrahim Memon