

Job Description – Robotics Intern

Job type: Full time Internship, On-site

Duration: 6 months

Stipend: INR 20,000 per month

Company Overview

The world is moving towards an autonomous future where sooner or later everything that is driven, pushed or pulled today, will be moving by itself.

At Flo Mobility, we believe that the true adaptation of autonomy lies in the seamless coexistence of humans and bots. By leveraging the power of sensors, computer vision, edge computing, and actuators, we optimize this relationship to deliver the best speed, agility, comfort and control. Our hero product, FLO Material movement robot, is an Autonomous Electric Material mover, helping customers reduce time and cost of moving material across Construction, Agriculture, Mining and Warehousing industries.

Flo Hauler is being used by industry leaders like L&T, Godrej, Embassy, Shobha etc to gain 50% savings on cost and time for the last mile of material movement. Our solutions are offered on Raas (Robot-as-a-service) model. The no capex approach makes it easy for our clients to adopt our MMRs (Material Movement Robots).

Key Responsibilities:

- Develop and maintain robotics software using ROS2
- Implement and integrate SLAM, localization, and mapping pipelines
- Work on sensor fusion and state estimation using data from multiple sensors
- Perform data collection, labeling, validation, and analysis from robotic systems
- Design and implement computer vision and perception algorithms
- Integration of sensors including 3D LiDAR, 2D LiDAR, IMU, wheel encoders, and cameras
- Implement and tune trajectory tracking and control algorithms such as: Pure Pursuit, PID, MPC (Model Predictive Control)

- Debug, test, and optimize software on real robotic hardware
- Collaborate with cross-functional teams to improve system performance and reliability Document designs, experiments, and results clearly

Qualifications and Requirements:

- Strong programming skills in Python and/or C++
- Hands-on experience with ROS2 (nodes, topics, services, TF, launch files) Understanding of robot kinematics, dynamics, and coordinate transformations Experience with SLAM, localization, and mapping algorithms
- Knowledge of sensor fusion and state estimation techniques (Kalman Filters, EKF/UKF) Experience working with real sensors: 3D / 2D LiDAR, IMU, Wheel encoders, Cameras Familiarity with trajectory planning and tracking techniques
- Comfortable working in Linux/Ubuntu environments

Good to Have (Plus):

- Personal or academic robotics projects (mobile robots, autonomous vehicles, drones, manipulators)
- Experience with model training, ML-based perception, or learning-based robotics Familiarity with OpenCV, PCL, NumPy, PyTorch/TensorFlow
- Experience with simulation tools (Gazebo, RViz, Isaac Sim, Webots, etc.) Understanding of real-time systems and performance optimization
- Exposure to version control (Git) and collaborative development workflows