BROLIN ANTONY

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Education

Master's in Robotic Systems Engineering
RWTH Aachen University, Germany.
(Oct. '22 - Present)

Bachelor in Mechanical Engineering
Anna University, Tamil Nadu, India.
(July. '14 - July '18)

Skills

ROS1 and ROS 2	●●●●●
C++, Python	●●●●○
ROS Library, PCL	●●●●○
Open CV, Boost, Behaviour trree	●●●●○
Github, Gitlab, Jupyter notebook	●●●●○
Docker	●●●○○

Languages

German	Beginner (A1)	●○○○○
Tamil	Native	●●●●●
English	Professional	●●●●○
Hindi	Intermediate	●●●○○

Professional Profile

Detail-oriented Robotics Engineer with 7 years of expertise, including 3.5 years in industrial applications and 3 years in academia, specializing in software development and deployment for mobile robots. Proficient in concept development, implementation, and testing. Renowned for being energetic, committed, and an exceptional team player.

Work Experience

Student Assistant
Machine Tool Laboratory WZL, RWTH Aachen.   Jan. 2023 - Present

- Autonomous mapping of UR10 workspace using frontier-based exploration algorithms. Final map is accurate to within 5 cm.
- Software setup for UR5 using ROS2 framework.
- Serial driver and plugin development for simulation of Robotiq Gripper using ROS2 and Gazebo Harmonic.

Student Assistant
Institute of Geomechanics and Underground Technology, RWTH Aachen.   Jan. 2023 - Present

- Simulation and evaluation of visual navigation of quadruped robots in soft terrains.
- Neural network-based classification of soft terrains using only ground reaction forces for terrain-aware navigation (Master's Thesis). Achieved 80% classification accuracy for simulated terrains.

Robotic Software Engineer
Botsync Technologies, Bengaluru, India   July 2020 - July 2022

- Reflector-based SLAM and localization for dynamic and feature-restricted production environments.
- Path generation using path primitives to replace the global planner and achieve faster planning and consistency.
- Visual and LiDAR perception algorithm for accurate docking.
- Motion planner for better docking performance.

Software Deployment Engineer   Jan. 2019 - July 2020
The Hi-Tech Robotic Systemz, New Delhi, India

- Enhanced obstacle detection algorithm using depth camera and 2D LiDAR with response time of under 1 milli second.
- Grid map merging for maps created at different time for robot's workspace expansion.
- Deployment of mobile robots on manufacturing sites.
- On-demand feature and function development as per customer request.