ATHUL KRISHNA

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PROFESSIONAL SUMMARY

Results-driven Robotics Engineer (MTech 2026) specializing in autonomous systems, ROS2 development, navigation algorithms, and real-time sensor processing. Strong hands-on experience with Gazebo, MoveIt2, MATLAB/Simulink, Linux, and embedded systems. Skilled in AI-driven decision-making, simulation modeling, and designing control solutions for autonomous robotics, USVs, and UUVs.

CORE SKILLS

Robotics & Autonomous Systems: Navigation, Motion Control, Path Planning, ROS2, Sensor Fusion.
Simulation: Gazebo, Unity, MoveIt2, MATLAB/Simulink, Blender, FreeCAD, SolidWorks.
Programming: Python, C++, C, Linux, Git.
AI/ML for Autonomous Systems, Control Systems, Embedded Systems.

EDUCATION

MTech (Robotics/Embedded/CSE/EEE/IT) – Expected 2026

BTech in Engineering – Year of Completion: XXXX

PROJECT EXPERIENCE

• Autonomous Navigation Robot using ROS2 & LiDAR: Designed navigation stack using ROS2 Nav2, SLAM, obstacle avoidance, and Gazebo simulation.

• Underwater Robot Simulation (UUV): Developed control algorithms and sonar-based perception pipeline.

• AI Decision System for Marine Robotics: Built ML-based decision-making pipeline.

• Robotic Arm Path Planning (MoveIt2): Designed URDF and implemented OMPL planners.

TECHNICAL EXPERIENCE

• ROS2 nodes, TF2, bagging, launch files, middleware.
• Real-time sensor integration (sonar, radar, GPS, camera).
• 3D world creation in Gazebo, Blender, FreeCAD.
• Communication systems for low bandwidth and high latency.
• Embedded systems with microcontrollers.

CERTIFICATIONS

• Robotics Specialization – Coursera

• ROS2 for Beginners – The Construct

• MATLAB/Simulink for Robotics

• Embedded Systems & Control Systems Certification

PROJECT LINKS

GitHub Portfolio: github.com/yourprofile