

Adnan Alvi

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Delhi, India

Education

B.Tech., Computer Science and Engineering (AI-ML)

2020 – 2024

Raj Kumar Goel Institute of Technology, Ghaziabad

CGPA: 8.4/10

Professional Experience

Nextup Robotics Pvt. Ltd.

Robotics Full Stack Developer

Jul 2023 – Present

- Engineered 6-DOF robotic arm software using ROS2 and C++, increasing operational efficiency by 20%.
- Designed real-time motion planning algorithms with ROS2 and MoveIt2, reducing computation time by 15%.
- Validated systems in Gazebo and RViz2 environments, ensuring 100% reliability for deployment.

Robotics Intern

Mar 2023 – Jun 2023

- Implemented inverse kinematics using ROS2 and MoveIt2, improving robot precision.
- Developed AI-driven path-planning simulations for mobile robots in dynamic environments.

Eleve8 Pvt. Ltd.

Machine Learning Intern

Jan 2023 – Mar 2023

- Built predictive ML models with Python and scikit-learn, achieving 85% accuracy on test datasets.
- Optimized data preprocessing workflows, cutting cleaning time by 30% through team collaboration.

Projects

Autonomous Mobile Robot

Jul 2024

- Designed a differential drive robot with ROS2 and Python, enabling precise navigation via inverse kinematics.
- Achieved 95% path accuracy in Gazebo and RViz2 simulations for dynamic environments.
- Tech: ROS2, C++, Python, URDF, Gazebo, RViz2, MoveIt2.

6-DOF Arm Robot Simulation

Jun 2023

- Developed custom motion controllers using ROS2 and MoveIt2, implement manipulator trajectory plugins.
- Simulated arm movements in Gazebo, ensuring robust performance.
- Tech: ROS2, C++, MoveIt2, Gazebo.

Technical Skills

- Languages:** C++, Python, JavaScript
- Libraries/Frameworks:** NumPy, Pandas, scikit-learn, React.js, QT, ROS, ROS2
- Tools:** Git, GitHub, Jupyter, VS Code, Gazebo, RViz2, MoveIt2
- Databases/Cloud:** MySQL, AWS

Certifications

- ROS and ROS2 for Robotics, 2023
- MoveIt2 for Motion Planning, 2023
- C++ with QT Frameworks, 2022
- Machine Learning with Python, 2021