Robotisim

5 Practical Tasks to Build Real-World Robotics Freelancing Skills

1. Replicate an Obstacle Avoidance Robot in Simulation

Description: Launch a ROS 2 simulation in Gazebo and implement a basic obstacle avoidance behavior using any standard algorithm.

Run it successfully once and save a short screen recording or screenshots as proof of execution.

2. Access a Remote Machine Using SSH and Linux Terminal

Description: Use the Linux terminal to SSH into a local or remote machine and navigate the file system confidently.

Execute simple commands (ls, cd, mkdir) and document the session in a text file.

3. Create a Basic ROS 2 Stack Overview Note

Description: Write a one-page note explaining the roles of the Controller server, Planner server, and Behavior Trees in ROS 2.

Summarize how these components interact during robot navigation in simulation.

4. Reproduce and Fix a Small Bug

Description: Intentionally modify a working ROS 2 node to create a small error, then reproduce the bug consistently.

Identify the root cause, fix it, and write a short explanation of what went wrong and why.

5. Draft a One-Page Robotics Freelance Proposal

Description: Choose a simple robotics task (e.g., obstacle avoidance simulation) and break it into milestones with timelines.

Structure it into a clear one-page proposal listing tasks, deliverables, and estimated completion time.