RIC Weekly Note # 5

Lecture Content

- Gazebo & ROS2 bridge
- TF2 – transform library
- URDF (Unified Robot Description Format) & SDF (Simulation Description Format)

Literature

- Gazebo installation - https://gazebosim.org/docs/garden/getstarted
- Gazebo tutorials - https://gazebosim.org/docs/garden/tutorials
- ROS2 – Gazebo bridge - https://docs.ros.org/en/humble/Tutorials/Advanced/Simulators/Gazebo/Gazebo.html

Exercises

Possibility 1 (mobile robot)

- Model a 4 wheeled mobile robot in gazebo
- Mount a lidar sensor or camera on top and visualise sensor data in rviz2
- Control the wheel joints to move the robot in the world

Possibility 2 (manipulator):

- Model a 2 DOF manipulator
- Mount a lidar sensor or camera on the end-effector and visualise sensor data in rviz2
- Control the joints to move the end-effector