

## REPORT WEEK (10/15/2023)

This week our project made some progress. We managed to get the Rp-LiDAR working although we still need to integrate it. Additionally, we successfully extracted IMU data from our devices. Got the gmapping package up and running. These accomplishments mark milestones in our efforts to utilize the iRobot 3 platform, for mapping.

Furthermore, we have outlined a plan for our steps. Once the iRobot 3 platform is ready, for mapping the halls we will begin by utilizing the gmapping package to create maps. Subsequently we will implement AMCL for location tracking. Despite generating an amount of data, we will also gather information on Wi Fi MAC addresses and signal strengths at points on the map. Following that our focus will shift towards data filtering as we examine signal patterns and distribution to refine our mapping and localization processes.

\*\* For running LiDAR and other packages I am using ROS as it is easier to find resources and documentations of it on open source platforms and also a lot of visualisation tools available makes it easier to analyse and debug the stuff going around.