

Report Date: 12/09/2022

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From: C.C

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Summary

The wheel part and overall building except a broom and a ramp of the robot had been finished. An Android application to visualize GPS tracking and path planning algorithms had been made, while preparing the final presentation for next week.

What C.C completed this week:

- Added another part of wheels and conveyor on the robot
- Met Minji and got feedback on the paper
- Kept making PowerPoint to prepare for the final presentation
- Sent start and end location to the next view using intent in Android Studio
- Fixed json format for conveying target area GPS coordinates from application to Raspberry Pi
- Wrote code generating subgoals in Python
- Had fixed an error related to Yolov7
- Decided to use another Pi, and installed the things that needed
- Added the details and error control messages in App
- Installed the new Raspberry Pi and ROS2 for Yolo detection

Things to do by next week

- Will finish building the robot
- Will build up the test environment and keep testing the robot on it
- Will prepare for final presentation

Problems or challenges:

- While the app tried to send the GPS subgoals, Raspberry Pi kept receiving 1448 bytes no matter how many bytes were sent because the limitation of TCP in Linux is 1448 bytes.
- As GPS coordinates work with the whole globe, the calculating distance between two coordinates entails errors in capturing subtle changes but keeping the decimal places without rounding off helps to deal with this problem even though it makes the number complex to look at.
- There are not enough references with Yolov7, and recent reference did not have ROS2 setup.

References