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To: ematson@purdue.edu, ahsmith@purdue.edu and lee3450@purdue.edu
From: C.C


- Eunmin Kim (32200928@dankook.ac.kr)
- Booyong Lee (201810909@sangmyung.kr)
- Hanbyeol Lee (yhb1834@cau.ac.kr)
- Jeeyoung Oh (jeeyoung9907@cau.ac.kr)
- Seoyeong Lee (lsyoung66@cu.ac.kr)



**Summary**

The robot platform had been made with Professor Eric. The physical team operated the motor and broom. In addition, PiCam was connected to the ubuntu successfully.


**What C.C completed this week:**

- Studied ROS2 tutorials [1]
- Built the platform
- Studied real time GPS tracking using Google Maps API [2]
- Studied relay module and GPIO [3]
- Ran the motor with relays
- Connected a PiCam to Raspberry Pi [4]

**Things to do by next week**

- Will keep studying ROS2 such as Rclpy library
- Will implement front detection node
- Will implement 2D LiDAR node
- Will build the code of real-time GPS tracking
- Will run the motor using GPIO pin

**Problems or challenges:**

- Linking VNC did not work well due to the dependency.
- The RPI.GPIO package did not fit for Python 3.8 due to the dependency.
- The Hamolar relay module did not have a reference, so it was hard to connect the motor and the Raspberry Pi.
- Multiple relays conflicted with each other because of power problem.
- In the circuit, the power supply has been a problem.

**References**


[1] "ROS 2 Documentation: Foxy." ROS.org. http://docs.ros.org/en/foxy/Installation/Ubuntu-Install-Debians.html (accessed Oct. 17, 2022).

[2] R. Bagja. "Track User's Location and Display it on Google Maps." medium. https://medium.com/risan/track-users-location-and-display-it-on-google-maps-41d1f850786e (accessed Oct. 31, 2022).

[3] B. Crostonn. "raspberry-gpio-python Wiki." sourceforge. https://sourceforge.net/p/raspberry-gpio-python/wiki/BasicUsage/ (accessed Oct. 31, 2022).

[4] Articulated Robotics, *How to Use Cameras in ROS (Sim Camera and Pi Camera)*. (Jul. 5, 2022). Accessed: Nov. 3, 2022. [Online Video]. Available: https://www.youtube.com/watch?v=A3nw2M47K50&ab_channel=ArticulatedRobotics