BLG 456E 2020/2021 Fall

Project Proposal Form

Project Name: An Autonomous Robot that Works in Warehouse

Group Name: RoboCop

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Project Description: Nowadays, e-commerce applications are popular in daily life. Therefore, logistics have a crucial role to meet the demands of the customers of e-commerce applications for fast and accurate delivery. These products are stored in warehouses. In our project, we use robots in warehouses to find, take and deliver the products to the distribution point of the warehouse. Thus, storage costs are reduced, and the delivery is realized in a smart, fast and efficient way. In our environment, there are several rooms. Each room is used to store only one kind of product and each room has an ID. The robot takes this ID as a voice command and it interprets this command to specify the room. Then, the robot takes any product in the specified room and brings it to the distribution point in the environment. We will use SpeechRecognition[1] library to detect voice commands. We consider using TurtleBot as the main robot. We will use the Gazebo simulation environment to implement the warehouse environment.

Project Tasks and Work Packages:

Ahmet Gökçe

- Ros environment setup
- Designing the map
- Searching and grabbing object
- Testing

Emre Güler

- Ros environment setup
- Movement between room and destination
- Testing
- Presentation

Mehmet Karaaslan

- Ros environment setup
- Speech command and interpretation
- Testing
- Video

Project Timeline:

TASK	PROJECT MEMBER	START DATE	END DATE
Ros environment setup	All	20.12.2021	23.12.2021
Designing the map	Ahmet Gökçe	24.12.2021	29.12.2021
Speech command and interpretation	Mehmet Karaaslan	24.12.2021	29.12.2021
Movement between room and destination	Emre Güler	30.12.2021	06.01.2022
Searching and grabbing object	Ahmet Gökçe	30.12.2021	06.01.2022
Testing	All	07.01.2022	09.01.2022
Presentation	Emre Güler	10.01.2022	11.01.2022
Video	Mehmet Karaaslan	10.01.2022	11.01.2022

References:

[1] https://pypi.org/project/SpeechRecognition/