Women in Al & Robotics Hackathon (24.06.2022 to 26.06.2022)

Author: Kashmira Shinde

## **Bonus Task**

Congratulations for finishing main task of the hackathon! You made it to the next level!

# Ball sorting task

- You are now given a differential drive robot with two wheels attached with a gripper.
- The gripper can move up/down and can open/close its fingers.





• The world has two balls (blue and green) placed on a table. There are two bins (blue and green) placed on either side of the table.



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- 1. Drive the robot near the table
- 2. Pick any one ball with the help of the gripper
- 3. Drive the robot to the bin of respective color (i.e. blue bin for blue ball and green bin for green ball)
- 4. Release the ball in the bin
- Repeat steps 1-4 for the other ball.

# ▼ Task would be considered complete when both the balls are in their respective bins!\*

\*Teams which finish this task will be given extra points.

### File download instructions

- 1. Please download the task files from drive.
- 2. Open the world *pioneer3dx gripper.wbt*
- 3. A template code is already given to you for the controller *pioneer3dx\_gripper.cpp* as a starting point for the task.