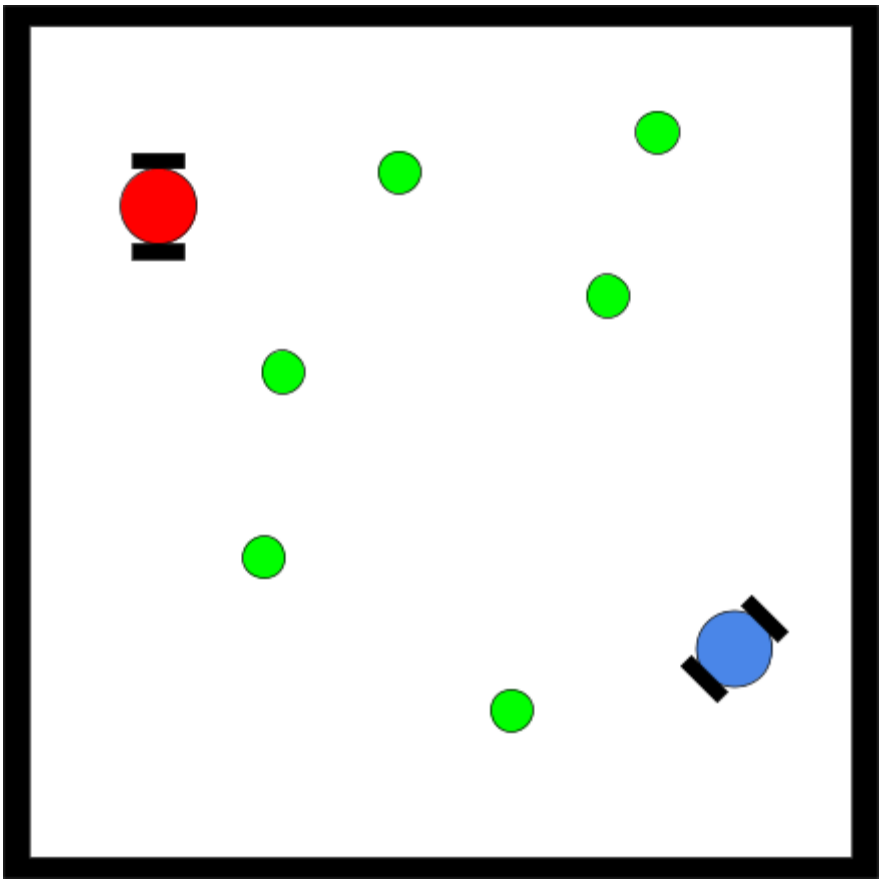
Fall 2023 - Final Project

CPE416
Fall 2023 - Seng
Final Project

Due Date

Friday, 12/8/23 (demo by Wednesday 12/6)



This will be a head-to-head contest where the goal is to push empty soda cans off the course. Scoring will be as follows:

- 1 point for each can
- 3 points for pushing the opponent robot off the

- 6 cans will be randomly placed on the course at the start of a match.
- Robots may start anywhere on the course. First robot placement is determined by a coin flip. The second robot must be placed at least 18” away from the first robot.
- Robots must weigh 900g or less
- When a can is pushed completely off the course, the team that scores must place the can within 1 foot of the opponent robot.
- The maximum footprint for a robot is 8” x 9”
- Only items freely available from Cal Poly dining establishments may be used as additional materials for your robot (that contact cans). You may 3D print additional structural brackets, but those prints may not touch cans. You may adjust traction using non-adhesive materials such as rubberbands.
- When a robot is pushed off the course, the robot must be placed on the course within 3” of the electrical tape border along any edge. The robot may be placed in any orientation and must be at least 18” away from the opponent robot.
- When a robot falls off the course on its own, the opponent determines the placement of the robot on the board again.
- A robot that falls off in the process of (or immediately after) pushing another robot off the course will lose 1 point.
- Robots must display “Ready” on the screen and

standard servo (not continuous rotation))
- A match will last 2 minutes.

Demo

For full credit, you must:
- Participate in the class contest
- Demonstrate that your robot (on the course without an opponent) can push all the cans off of the course within 2 minutes and your robot must stay on the course. Demos must be run by the end of class on Wednesday, 12/6/23.