## Recommended Assessment

## **Object Detection**

- 1. Explain the reasoning behind the negative gain and  $\pi/2$  bias on the raw lidar data.
- 2. Why is it important to adjust the measured data for the forward displacement of the lidar? Use your implementation from the **correct\_lidar** method.
- 3. What is the motivation behind scaling the size of the safety window based on the forward speed of the robot?
- 4. What is the motivation behind changing the direction of the safety window based on the turn speed of the robot?