Collision Detection & Avoidance in Robocar

CSEL-395 Internet of Things
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Apparatus

- Arduino UNO
- DC Motors
- L298N Motor Driver Module (H - Bridge)
- Servo Motor
- Ultrasonic Sensor
- Jumping Wires

Description

- 12V is given to H - Bridge.
- H-bridge is passing 5V to Arduino UNO.
- Programmable Code is running in Arduino UNO.
- 4 pins of Arduino are connected with H - Bridge for controlling DC Motors.
- DC motors are directly connected to H - Bridge.
- Servo motor is connected to the Arduino which is rotating 90% towards left and right.
- Ultrasonic sensor is attached to the Servo motor so that when the motor rotates, the sensor measures the distance to avoid collision.
- Car moves in the direction where the distance is large.

Source Code

- GitHub - Collision Detection & Avoidance

Demo

- Youtube - Collision Detection & Avoidance using Robocar (4:30 - 5:09)