A2: Driverless Cars

1001-act2 Introduction to Electronics

Summary

In this activity you will learn how a robot makes decisions and how its decisions might differ from your own idea of the “right” decision. Take the infamous Trolley Problem for example, where there is a train bound for collision with five people. You as an observer can change the tracks so that it hits one person instead.

Our scenario is a little different. An autonomous car is driving towards a tunnel entrance. There are five pedestrians crossing in front of it: a child, a teenager, an adult, an old man, and a pregnant woman. The car cannot stop and must make a choice on whether to hit one of them or crash into the walls on either side of the entrance. If it hits a wall, the driver will die.

Will the car choose to hit the wall or one of the people? If it chooses on of the pedestrians, which one would it aim for? Which option would you pick as a driver in control of the vehicle? Does it differ from the choice the computer would make if it had control of the vehicle?

Masudaya Mini Replica X-9 Robot Car Side
D J Shin - My Toy Museum (CC BY-SA 3.0)

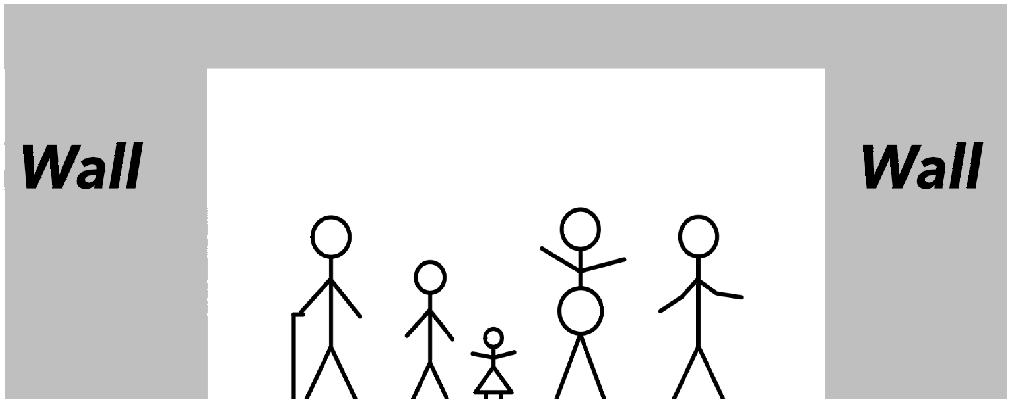
What You Need

- Means of viewing the Robot Tasks video: Would you sacrifice one person to save five? - Eleanor Nelsen

Instructions

1. Watch the video: Would you sacrifice one person to save five? - Eleanor Nelsen
2. Pretend you are the driver of the crash bound car and decide which person or wall gets hit.
3. Do it again, but this time pretend you are the computer controlling the car.

What the Car Sees



Additional Resources

These are some additional resources for those who wish to explore this activity more:

- BBC Newsnight: The trolley problem and ethics of driverless cars
- The Ethics and Safety of Driverless Cars with Neil deGrasse Tyson & Malcolm Gladwell
- Why You Should Want Driverless Cars On Roads Now