Working of Driver Protection System

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RADAR:

Contains an ultrasound sensor(HC-SR04), as well as a servo motor
The motor moves every degree, and gets the distance of the nearest obstacle. If it's below 0.5m, it sounds a buzzer. You can also view the radar gui on the screen

Drowsiness Detection for cars:

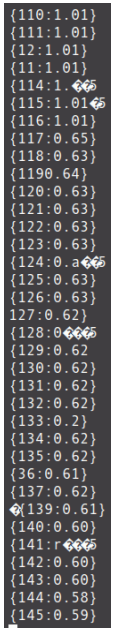
Contains resistive touch sensor, on the steering wheel, if the driver gets drowsy and loosens the grip on the wheel, it can sense and alert the driver

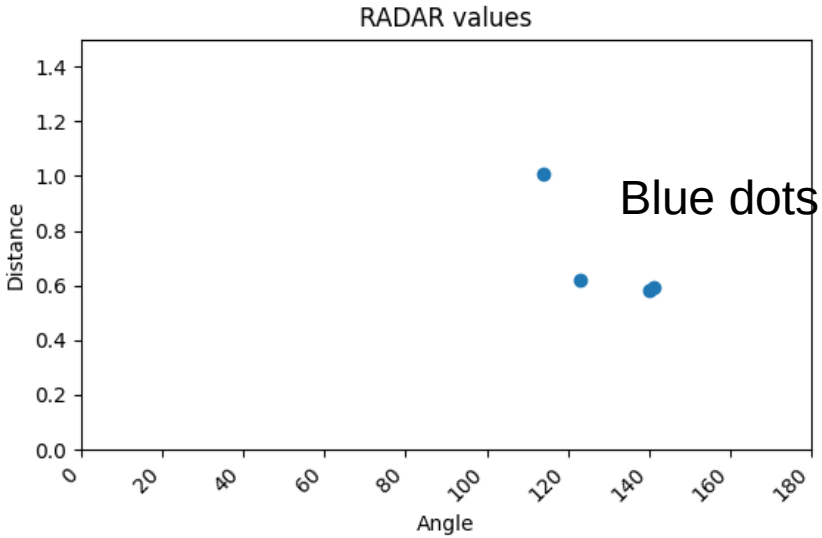
Optional Features:

- Using image processing and AI to detect if the person is drowsy or not
- Adding a TENS unit to the wrist of the driver, to give a small shock the driver, in case he/she falls asleep, apart from waking the driver up, it will also force his arm to tighten the grip on the wheel, by making the muscle contract involuntarily

Progress made from Review 1 to 2

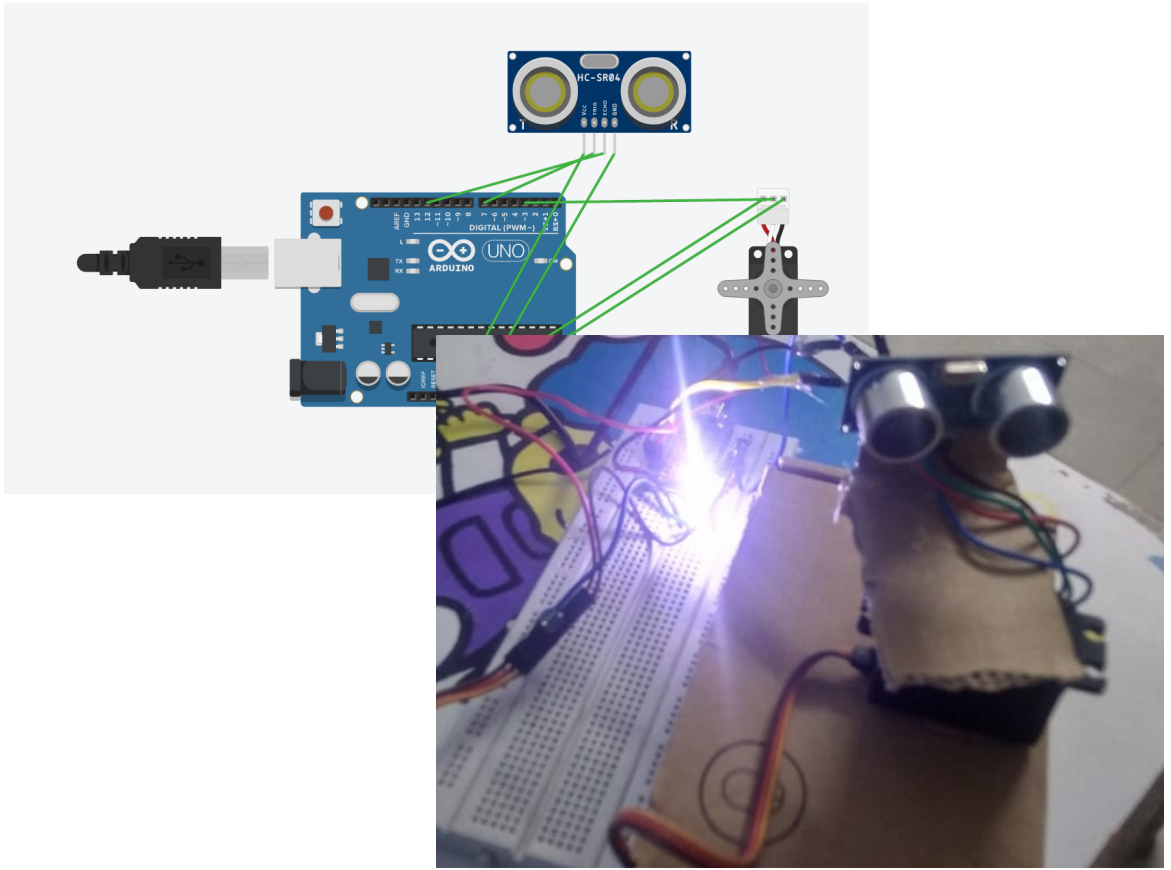
- Found many applications for the project
- Built the RADAR part, and able to view values on the screen

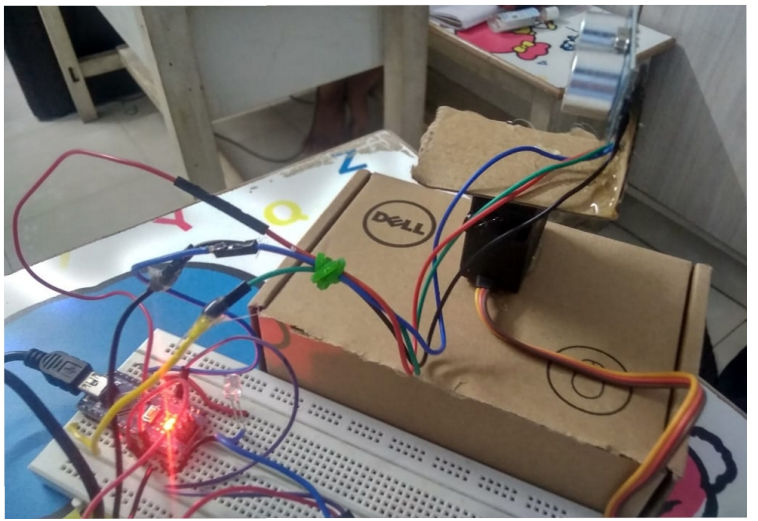




Blue dots are obstacles

Circuit and Circuit Diagram





Buzzer was not available, had to use a really bright LED instead