REVIEW ON LANE AND OBJECT DETECTION FOR ACCIDENT PREVENTION IN AUTOMATED CARS

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Objectives:
1. Detect the lanes and curves
2. Detect the objects and take action to stop

Methodology:

To begin with, we setup the model by setting up the Robot Chassis with the motors and hardware components such as Raspberry Pi, Arduino etc. To setup the slave device that is Arduino, we must first install the Arduino IDE and code to establish the forward, backward functions.

Moving on, we have to set up the Master device that is the Raspberry Pi 3 B+. First flash the Raspbian OS on the Raspberry Pi 3 B+, and then Connect Raspberry PI to Personal Computer through Ethernet and connect Raspberry PI to Personal Computer through Wi-Fi and lastly Connect Raspberry PI to Personal Computer through VNC Viewer. Next, we install open cv on Raspberry Pi and remove all the unnecessary software. Build open cv on Raspberry with CMake and set up the libraries. Next we connect the sensors to detect the lanes and objects and connect to VNC viewer and operate the model.

Expected Outcome:

The model car should be able to move in the lanes and stop at a 25 meters distance if an object is detected.