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BSc in the Internet of Things

Advanced Driver Assistance Systems

# Description of Feature

The feature I have chosen to implement for this assignment is advanced lane keeping assist when there are no lanes drawn on the road. This feature considers the width of the road and calculates where the lane should end. This is used to calculate the ideal position of the vehicle. This feature becomes inactive if there are lines painted on the road. The feature connects to maps to find out the type of the road that the vehicle is on, for example a one-way single-lane road does not require this feature. If the road is narrow and an oncoming vehicle is detected, the lane dimensions are adjusted and if necessary, the feature gives way to an oncoming vehicle.

# Assumptions

The car is driving on a well-lit road.

There is a driver in the vehicle.

# Rational, Goals, Benchmark metric

The goal of the system is to establish a vehicle’s ideal position on a road with no road markings.

The rational is to provide feedback on the driver based on the ideal and current positioning of the vehicle.

## Benchmarks

The system must be able to detect that a road has no road markings from camera video footage.

The system must be able to identify the edge of the road.

The system must be able to measure the width of the road and divide it accordingly.

The system must indicate to the driver where the road markings should be.