Data Collection of Motorized Vehicles (DcMV).

CpE 191/EEE 193B

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PROBLEM STATEMENT

To tackle the parking problem at Sacramento State by using image recognition to collect parking data.

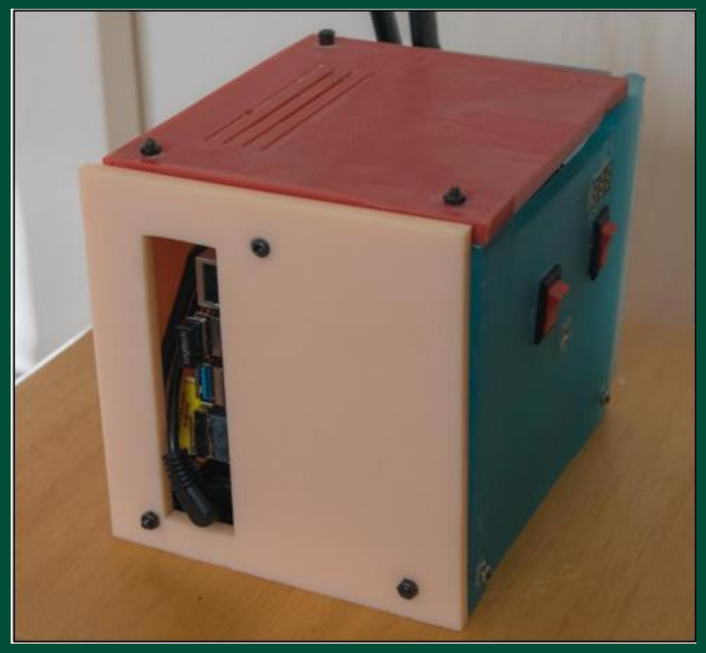

Figure 1: DcMV System

BACKGROUND

Finding an open parking spot at Sacramento State is a time-consuming task. Our system seeks to collect good accurate information that professionals in the field can analyze to create a solution for the parking problem. By providing a cost-effective and transparent system, they can more readily create a solution.

Figure 2: Parking spot occupation detector

SUMMARY OF WORK

For our project we trained a neural network system to be able to recognize different classification of vehicles, detect if a parking spot is occupied, keep track of vehicles entering and exiting a parking area and show the data collected through a GUI.

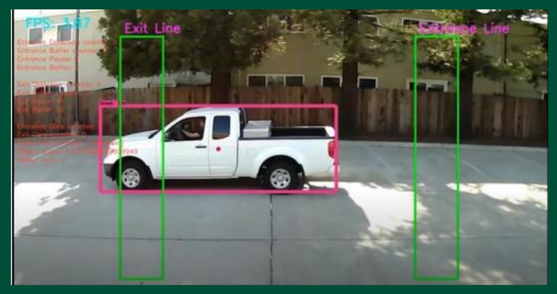

Figure 3: Entering/Exiting function

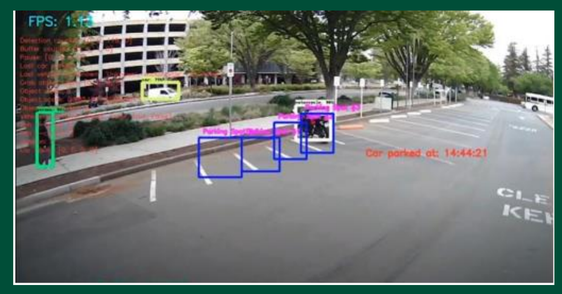

Figure 4: Parked motorcycle

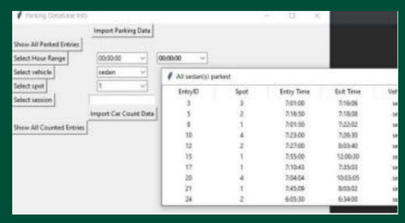

Figure 5: GUI

IMPACT ON COMMUNITY

- This system could help ease the stress of trying to find on-campus parking on a busy day.
- This system could be used by professionals inside and outside of the college campus.
- Provides a cost-effective alternative to products on the market, that is more accessible to professionals.