

Area Speeding Check

Ministry of Road Transport And Highways

PROBLEM STATEMENT:

- ▶ Due to resource constraints, no traffic police staff is posted at road crossings. Accidents are often reported due to negligence by the road users. Speed limit of the area can check by using technology and authorities can be intimated of the over-speeding 24×7. Also a photo should be shot through the traffic cameras of the speeding vehicle and relayed to the authorities for due action.



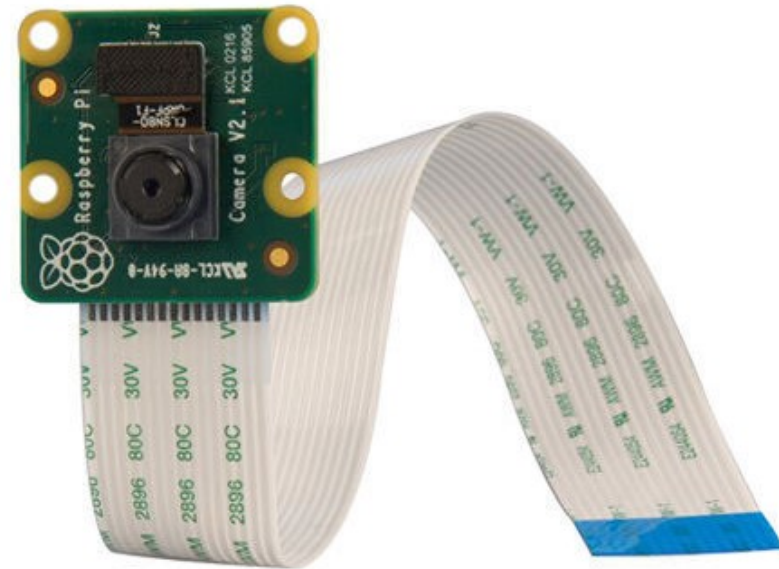
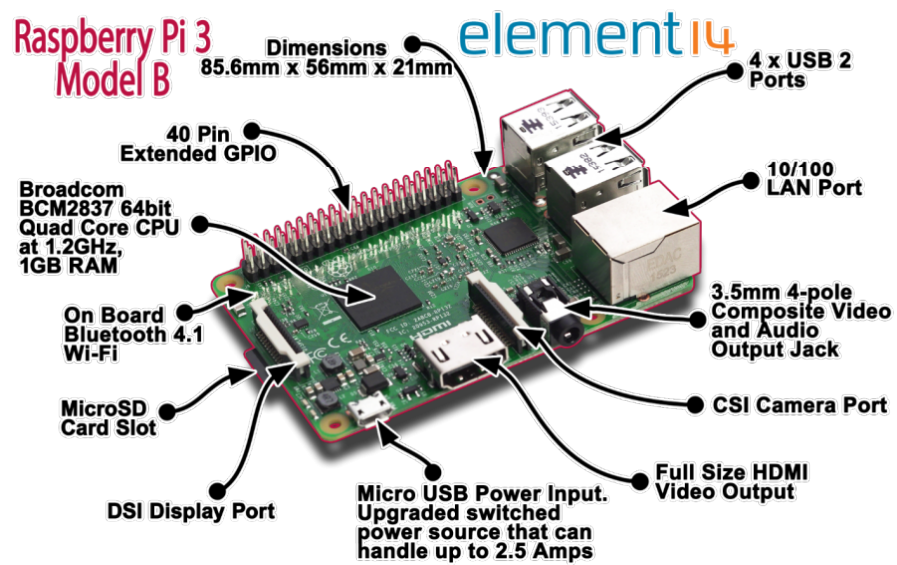
ABSTARCT:

- ▶ Rash driving is the cause of many road accidents all over the world. To overcome this problem and decrease the treat due to accidents introduction of new and innovative speed enforcement technology is necessary. This project presents a device to detect rash driving on highways and to alert the traffic authorities by sending the image of the particular vehicle



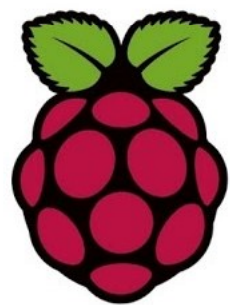
HARDWARE REQUIREMENTS:

1. Raspberry pi 3 Module B
2. Picamera



SOFTWARES:

1. Raspbian Jessie
2. Opencv with python language



Raspbian



STEPS INVOLVED:

1. Motion detection and speed calibration.
2. Capturing the image of over speeding vehicle.
3. Creating .csv (Comma Separated Value) file which consists of location, time, date and the speed of the vehicle.
4. Sending the image and .csv file to the authority through mail.



SPEED CALIBRATION AND CAPTURING THE IMAGE:

- ▶ A particular area of a raw streaming video is being cropped in which the speed of the vehicle is determined.
- ▶ The cropped area is further segmented into number of divisions so that the speed across each segment is calculated using simple calculation, $SPEED = \frac{DISTANCE}{TIME}$.
- ▶ If the speed exceeds the threshold value the image of the vehicle will be captured.



.CSV FILE:

- ▶ .csv can be expanded as Comma Separated Value
- ▶ Speed, time, date and location of the vehicle will be converted into .csv file.



SENDING THE IMAGE:

- ▶ The captured image of the over speeding vehicle along with the .csv file is send to the authority

