CHAPTER 3

OVERALL DESCRIPTION

This is a python based Speed Limit Detection System which provide a lot of facility to detect and identify the speed limit number. The objective and scope of the project "**SPEED LIMIT DETECTION FROM TRAFFIC SIGN BOARD**" is to detect and identify the speed limit without the help of the human effort. It simplifies the task and reduce accident rate. The system is very user friendly and it is anticipated that functions of the system will be easily accessed by the authorities. This project uses image processing techniques to identify speed limit boards .

3.1 PROPOSED SYSTEM

This paper present a novel and simple method for traffic speed limit sign board detection. A new technique is implemented for the detection and recognition of road speed limit signs which is an important task in advanced driver assistant system. The speed limit signs are important in informing the driver about the allowable speed in a particular area. Here a new method is proposed for speed limit sign detection and recognition in real time. "Speed limit detection from traffic sign board using artificial intelligence" .The main aim of this project is driver assistance system. This method has a real time processing ability to remind drivers about the speed limitation when they drive their vehicle in different road conditions. It is implemented inside a vehicle not in the road,as during the first part image acquisition and pre-processing is done. Image acquisition can be used Using "pi". Then followed by this, traffic sign board detection such as shape and color, speed limit number detection, number identification and speed limit recognition is done.

3.2 FEATURES OF PROPOSED SYSTEM

- Road accidents due to over speed can be reduced
- More accurate
- Gives correct identification of the speed limit
- Driver assistance system
- Vehicles additional functions can be increased
- Saves life
- High accuracy and processing speed

3.3 FEASIBILITY STUDY

The feasibility study investigates the problem and the information needed for the solution to the problem .It seeks to determine the resources required to provide an information systems solutions, the cost and benefits of such a solution and the feasibility of such a solution. The goal of the feasibility study is to consider alternative information system's solutions, evaluates their feasibility, and propose the alternative most suitable to the organization. The feasibility of a proposed system is evaluated in the terms of its components.

These components are:

3.3.1 Technical feasibility

The system is technically feasible as the program language and the hardware's used for it is easily available. The system is developed by using python and anaconda which can be easily understood by anyone .There is only need of Raspberry pi to run the program written in python.

3.3.2 Operational feasibility:

Operational feasibility covers two aspects. One is technical performance, and other is acceptance by the authorities. The Speed Limit detection system is operationally feasible as it is very interactive and user friendly. It fulfills almost all the authority's requirements.

3.3.3 Economic feasibility:

The tools that will be used for the Signboard detecting system is Raspberry pi. The Program code installed in the Raspberry pi is written in Python and Anaconda, both are Open source software's which is available for free of cost. Raspberry Pi is cheaply available in today's market. As the quality of Raspberry Pi increases the performance of the system will also increases. So it makes the project economically feasible.