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Honk Before Turning of Your Engine

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Abstract: Nowadays journey is most important, however to make it more convenient it is important to do some preliminary checks before beginning your journey. A pet could get under the car, alert the owner honk the horn before starting the engine. Every year when the weather gets colder, pets take the rest under the cars and are killed accidentally. many pets die due to this way every year‘‘ so in order to save pets our software observes if any pet animal is present under the car. If at all any pet animal is present it instructs the owner by giving an alert message. For example, image classification is straightforward, but the differences between object localization and object detection can be confusing, especially when all three tasks may be just as equally referred to as object recognition.

I. INTRODUCTION

The application of machine learning in the automobile is trending and playing a key role in saving lives and avoiding accidents whenever we are going to travel by car or by heavy vehicle the driver will not check under the cars however to make it more convenient it is important to do some preliminary checks before beginning your journey. Street dogs could get under the car, our software alerts the owner and honks the horn before starting the engine. Every year when the weather gets colder, street dogs and cats take the rest under the cars and are killed accidentally. many pets die this way every year‘‘ so in order to save pets our software observes if any pet animal is present under the car. If at all any pet animal is present it instructs the owner by giving an alert message.

II. EXISTING SYSTEM

The cameras are usually powered by the same power source as the brake and thus switches on automatically whenone engages the reverse gear. Majority of these backup cameras usually come with a transmitter (near the camera) and a receiver (near the display) for relaying the signals and live images, use solar energy for power. Some models also sync directly with one's phone using an app which then acts as the display. The main advantage of this type of backup camera is that it is extremely easy to install and rarely requires the help of professional when doing it. The installation of these cameras also do not interfere with a car's look as minimal to no drilling or laying of wires is required. However, this comes at a cost as some of these wireless cameras are quite expensive.

III. PROBLEMS OF THE EXISTING SYSTEM

Backup cameras are common on vehicles that tow difficult-to-see trailers, such as motorhomes. Recently, with the rise in popularity of in-dash DVD players and Gps navigation systems which aid in justifying the expense of adding a color LCD to the driver's seat, they have become much more common, often available as optional factory accessories on standard passenger trucks and sport utility vehicles, as well as aftermarket accessories. Inside the vehicle, the display is typically wired to automatically sense when the transmission is set in reverse, showing the backup view while in reverse and or providing grid guidelines by detecting the parking lot markings to aid the driver. The display will show the map (or other content) on the screen at all other times typically in other gear modes in most parking systems. The display for these types of backup cameras can be powered from the cigarette socket on the car's dashboard. Some of the displays are also integrated on the rear-view mirror thereby giving it a multipurpose function.

IV. PROPOSED SYSTEM

In the proposed system, the user enters the car then it will check the surroundings by giving the voice then it will show a message to the owner then the driver will start the car. This project can be developed with the help of data and is based on the pet animals data we give and based on the data it will show a message to the owner and save the pet animals.

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V. BENEFITS OF THE PROPOSED SYSTEM

- This project is mainly useful for people and to those who are using cars.
- This project will also be helpful to the people who are travelling to a new place
- Higher performance.
- Able to get better insights from the result.
- Accurate results can help the users to know about the pet Animals.

VI. METHODS

System requirements: Voice command acceptance device, Video streaming device, Browser to access the application, python 3.6
Software Requirements: Pandas, Matplotlib, Numpy, NLTK, Anaconda, Jupiter, Windows 10 or windows 8.
Hardware Requirements: Voice acceptance device, Video streaming device,64-bit operating system, x-64- bit processor, 8 GB RAM, Processor: Intel i5 or i7.

VII. LITERATURE SURVEY

In this paper, a method for estimating the traffic using OpenCV is presented. This is done by using the camera images captured. Each image is processed separately and **identified the pet animal**. In various fields, there is a necessity to detect the target object and also track them effectively while handling occlusions and other included complexities. Many researchers (Almeida and Guting 2004, Hsiao-Ping Tsai 2011, Nicolas Papa dakis and Aure lie Bugeau 2010) attempted for various approaches in object tracking. The nature of the techniques largely depends on the application domain. Some of the research works which made the evolution to proposed work in the field of object tracking are depicted as follow.techniques and algorithms used in this project promises to be more effective as compared to the previous system.The advantages of this new method include such benefits as use of OpenCV over sensors, low cost, easy setup and relatively good accuracy and speed. Because this method has been implemented using OpenCV software, production costs are low while achieving high speed and accuracy.

VIII. MODULE SPECIFICATION

Here we are maintaining two types of modules to do all types of actions. That is

✓ Objection detection module.

✓ Training module Objection detection module

This module need to accept the user voice command and based on the voice command video streaming need to activate to perform objection analysis Training module This module mainly used to train the model based on various images of pet animal

IX. ARCHITECTURAL DESIGN

Requirements of the software should be transformed into an architecture that describes the software's top-level structure and identifies its components This is accomplished through architectural design (also called system design), which acts as a preliminary 'blueprint' from which software can be developed IEEE defines architectural design as 'the process of defining a collection of hardware and software components and their interfaces to establish the framework for the development of a computer system' This framework is established by examining the software requirements document and designing a model for providing implementation details These details are used to specify the components of the system along with their inputs, outputs, functions, and the interaction between them An architectural design performs the following functions:

1. It defines an abstraction level at which the designers can specify the functional and performance behaviour of the system
2. It acts as a guideline for enhancing the system (whenever required)by describing those features of the system that can be modified easily without affecting the system integrity
3. It evaluates all top-level designs
4. It develops and documents top-level design for the external and internal interfaces
5. It develops preliminary versions of user documentation
6. It defines and documents preliminary test requirements and the schedule for software integration

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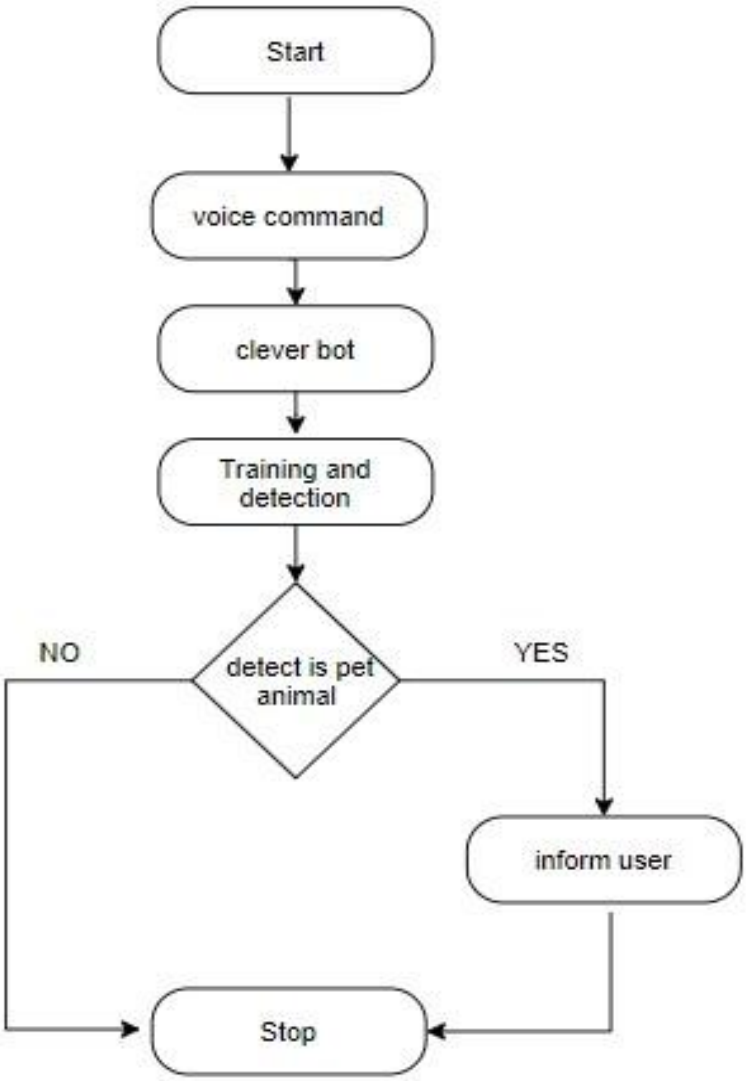
7. The sources of architectural design are listed below
8. Information regarding the application domain for the software to be developed
9. Using data-flow diagrams
10. Availability of architectural patterns and architectural styles.

Architectural design is of crucial importance in software engineering during which the essential requirements like reliability, cost, and performance are dealt with This task is cumbersome as the software engineering paradigm is shifting from monolithic, stand-alone, built-from-scratch systems to componentized, revolvable, standards-based, and product line oriented systems Also, a key challenge for designers is to know precisely how to proceed from requirements to architectural design To avoid these problems, designers adopt strategies such as re-usability, componentized, platform-based, standards-based, and so on. Though the architectural design is the responsibility of developers, some other people like user representatives, systems engineers, hardware engineers, and operations personnel are also involved. All these stakeholders must also be consulted while reviewing the architectural design in order to minimize the risks and errors.



Here in the above figure, the architectural view of the entire application is shown We are developing the application using python 3.6The application when launched, works accordingly as developed using by the user command “yes” All the screens are displayed according to the modules specified All the user’s input is retrieved into the application and this input will be predicted

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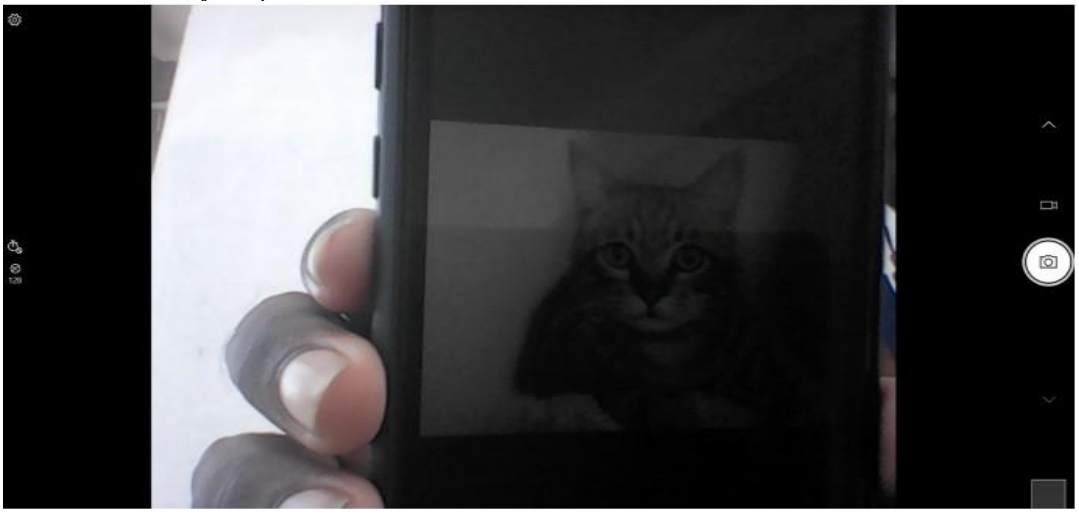
X. RESULTS

OUTPUT

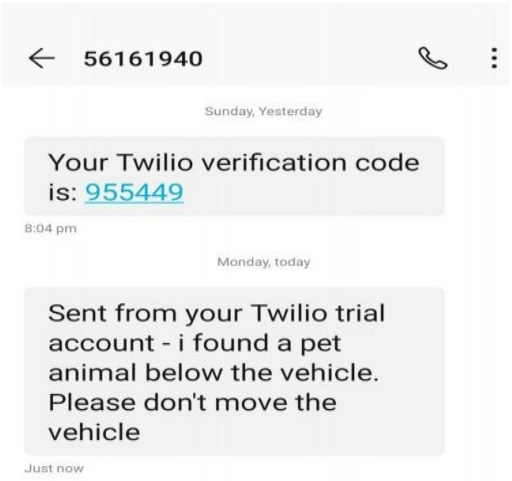
1. Camera will recognizing the voice of a driver “yes” and start the processing of open a camera

```
Microsoft Windows [Version 10.0.19042.1052]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Lenovo\Desktop\project>pythonreal_time_object_detection.py--prototxt MobileNetSSD_deploy.prototxt.txt --model M
obileNetSSD_deploy.caffemodel
'pythonreal_time_object_detection.py--prototxt' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Lenovo\Desktop\project># python real_time_object_detection.py --prototxt MobileNetSSD_deploy.prototxt.txt --mod
el MobileNetSSD_deploy.caffemodel
'#' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Lenovo\Desktop\project>python real_time_object_detection.py --prototxt MobileNetSSD_deploy.prototxt.txt --model
 MobileNetSSD_deploy.caffemodel
i am listening...
recognizing...
say that again please...
i am listening...
```

2. camera will identify the pet animal and alert the driver



3. Getting an alert message to the driver



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XI. CONCLUSION

If we see in seasons pet animals will take rest under the cars, lorries and heavy vehicles ,they are being killed accidentally. many pets die this way every year“ so in order to save pets our software observes if any pet animal is present under the car. If at all any pet animal is present it instructs the owner by giving an alert message. So by this many pet animals will be saved and this also will be used to see if at all any oil leakage is there and any damages under the car will be identified. In the proposed system, the user enters the car then it will check the surroundings by giving the voice then it will show a message to the owner then the driver will start the car . This project can be developed with the help of data and is based on the pet animals data we give and based on the data it will shows a messages to owner and saving the pet animals

- This project is mainly useful for people and to those who are using cars.
- This project will also be helpful to the people who are travelling to a new place
- Higher performance.
- Able to get better insights from the result.
- Accurate results can help the users to know about the pet Animals.

XII. FEATURE ENHANCEMENT

Future Enhancement: With the system we proposed, we are trying to extend this to the maximum. The scope of the project can further be improved in many ways. The first step we are planning is to send an image of a pet animal to the driver in our future enhancement Even we are planning to identify the oil leakages and any break failure in our feature enhancement we want add all above mention to our project.

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