



Multi Traffic Scene Perception Using Support Vector Machine And Digital Image Processing

Dr.R.POORVADEVI

Associate Professor, Dept. of CSE, SCSVM University.

P.V.RISHI KIRAN

Student, Dept. of CSE, SCSVM University.

CH.PREM KRISHNA CHARAN

Student, Dept. of CSE, SCSVM University.

Abstract: Traffic accidents are especially intense for a rainy day, Night, rainy season, rainy season, ice and day without street lighting many low-level conditions. Current View Drive the help systems are designed to be done under good-nature Weather. Classification is a method of identifying Optical characteristics of vision expansion protocols more efficient. Improve computer vision in awkward manner Weather environments, multi-class weather classification system many weather features and supervision were made Learning. First, basic visual features are extracted Multiple traffic pictures, then the feature is revealed. The team has eight dimensions. Secondly, five supervision was made Learning methods are used to train instructors. Analysis the extracted features indicate that the image describes accurately the highest recognition of etymology and classmates is the accuracy rate and adaptive skills. Provides the basis for the proposed method anterior vehicle innovation increases invention Night light changes, as well as increases View of driving field on an ice day. Image feature extraction is the most important process in pattern recognition and it is the most efficient way to simplify high-dimensional image data. Because it is hard to obtain some information from the $M \times N \times 3$ -dimensional image matrix. Therefore, owing to perceive multi-traffic scene, the key information must be extracted from the image.

INTRODUCTION

Highway traffic accidents bring mass losses to people's lives and property. Advanced driver assistants (ADAS) play an important role in reducing traffic accidents. A multi-traffic display of complex weather conditions is valuable information for help organizations. Special approaches in can be used to improve visibility based on different weather conditions. This will contribute to the expansion of ADAS. There have been little work weather-related issues for automotive cameras so far. Classification of interior and exterior images through the margin intensity. Concentration curves to form four fog levels by a neural network. Providing a novel structure to recognize different climates. Milford and many others. Current view-based localization and mapping in altering external environments. Find important changes Driving is an important task during driving Help Systems. propose a sight-based skyline Finding algorithms under picture brightness variations Fu and Al. Automatic traffic data collection varies Lighting conditions. Freatch and many others. Classes to use Detecting road segment in many traffic scenes.

EXISTING SYSTEM

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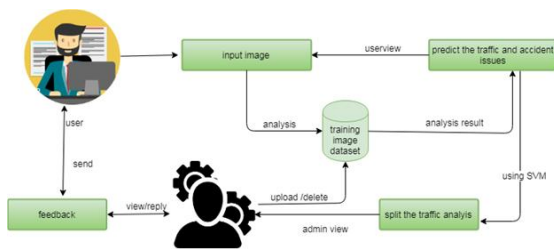
PROPOSED SYSTEM

Image feature extraction is the premise step of supervised learning. It is divided into global feature extraction and local feature extraction. In the work, we are interested in the entire image, the global feature descriptions are suitable and conducive to understand complex image. Therefore, multi-traffic scene perception more concerned about global features, such as color distribution, texture features outdoor conditions. Propose night image enhancement method in order to improve nighttime driving and reduce rear-end accident. Present an effective nighttime vehicle detection system based on image enhancement. Present an image enhancement algorithm for low-light scenes in an environment with insufficient illumination. Propose an image fusion technique to improve imaging

quality in low light shooting. Present global and local contrast measurements method for single-image defogging. Present single image dehazing by using of dark channel model. Present a novel histogram reshaping technique to make color image more intuitive. Present a framework that uses the textural content of the images to guide the color transfer and colorization. In order to improve visibility. Propose an improved EM method to transfer selective colors from a set of source images to a target image propose a multi-vehicle detection and tracking system and it is evaluated by roadway video captured in a variety of illumination and weather conditions. Propose a vehicle detection method on seven different weather images that captured varying road, traffic, and weather conditions. So, reduce the traffic and accident issues.

ARCHITECTURE

Below diagram depicts the whole system architecture of Admin and Developer in Serious Games Using Machine Learning



MODULES

There are three modules can be divided here for this project they are listed as below

- Weather Reports
- Find Weather
- Analysis Reports
- Graphical Representation

From the above three modules, project is implemented. Bag of discriminative words are achieved

SYSTEM REQUIREMENTS

The project involved analyzing the design of few applications so as to make the application more users friendly. To do so, it was really important to keep the navigations from one screen to the other well ordered and at the same time reducing the amount of typing the user needs to do. In order to make the application more accessible.

REQUIREMENT SPECIFICATION

Functional Requirements

Graphical User interface with the User.

Software Requirements

For developing the application, the following are the Software Requirements:

1. Python
2. Django

Operating Systems supported

1. Windows 7
2. Windows XP
3. Windows 8

Technologies and Languages used to Develop

1. Python
2. Designing : Html.
3. Data Base : MySQL.

Debugger and Emulator

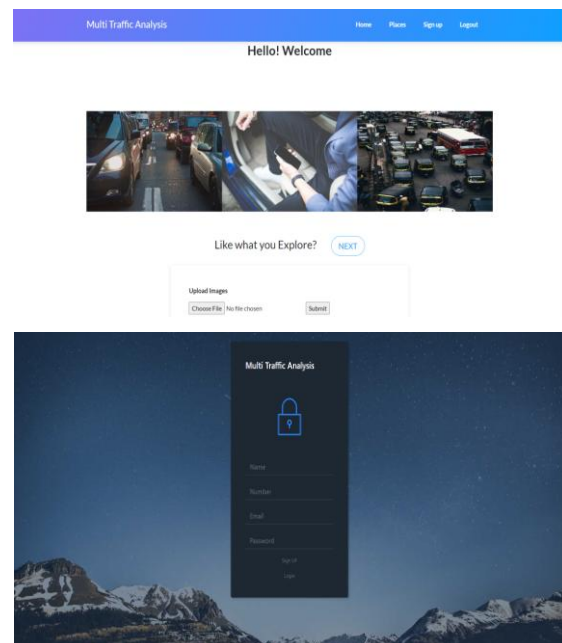
Any Browser (Particularly Chrome)

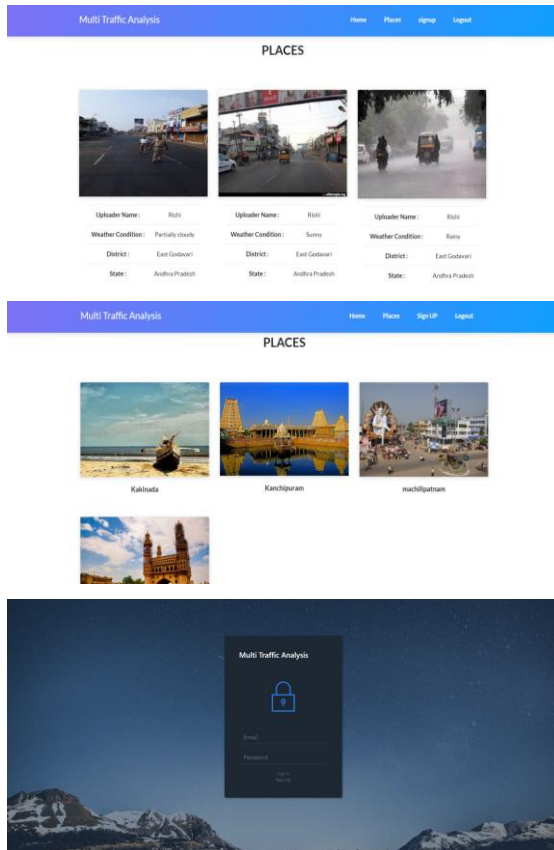
Hardware Requirements

For developing the application, the following are the Hardware Requirements

- Processor: Pentium IV or higher
- RAM: 256 MB
- Space on Hard Disk: minimum 512MB

Test Results:





SYSTEM TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub assemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

TYPES OF TESTS

- 1) Unit Testing
- 2) Integration Testing
- 3) Functional Testing
- 4) System Testing
- 5) White Box Testing
- 6) Black Box Testing
- 7) Test strategy and approach
- 8) Acceptance Testing

Test Results: All the test cases mentioned above passed successfully. No defects encountered.

Test Case ID	Test Activity	Expected Output	Actual Output	Test Case Result
TC01	Enter the Login Credentials	Successful	Successful	Pass
TC02	Enter the Registration Details	Successful	Successful	Pass
TC03	Enter the User ID	Successful	Fail	Fail
TC04	Enter the Password	Successful	Fail	Fail
TC05	Enter Valid User ID	Successful	Successful	Pass
TC06	Enter Valid Password	Successful	Successful	Pass
TC07	Choose an Image	Successful	Fail	Fail
TC08	Upload Image	Successful	Fail	Fail
TC09	Choose a Traffic Image	Successful	Successful	Pass
TC10	Upload Image	Successful	Successful	Pass

CONCLUSION

Road signals based on road images are a new and challenging subject, which is widely needed in many sectors. Therefore, the study of weather authorization based on images is an urgent request, which helps detect weather conditions for many visual systems. Classification is a method to classify optical properties for more efficient vision development protocols. In this sheet eight global basic features are extracted and 5-tracking learning algorithms are used to understand the multi-traffic road view used to evaluate color features protocol features, and range features. Thus, the extracted features are more detailed. The proposed eight features have demonstrated that the image attributes can not accurately describe, but have strong weakness and stability in a complex climate environment. In the future, the proposed instructions should be checked with a larger image package. Integrated learning is a new paradigm in the field of machine learning. It is worth to learn about the generalization of a machine learning system. Visual image expansion mechanisms used in the public film are desirable to further investigate.

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