VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA CAMPUS, BELGAVI-590018

PROJECT REPORT

On

"PLANT DISEASE PREDICTION USING ATMOSPHERIC CONDITIONS"

Submitted by

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POOJA R	**4AL15IS024**
POOJA T S	**4AL15IS025**
SAMEEKSHA HEGDE	**4AL15IS036**

In partial fulfillment of the requirements for the degree of

BACHELOR OF ENGINEERING

In

INFORMATION SCIENCE AND ENGINEERING

Under the Guidance of

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2018– 2019

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ABSTRACT

Agriculture, a scientific discipline and skillful activity of cultivating flora and domestic animals. One of the major employment sectors of India is agriculture. It is the pillar of Indian economy and subsidizes to the whole financial succession of the country. To improve quality of farming an Internet of Things (IoT) based system can be recommended. An IoT system consists of actuators and, or sensors, or both that affords connectivity to the internet directly or indirectly. In this paper, a novel system is developed using various sensors- like soil moisture sensor, Temperature sensor, Humidity sensor and Gas sensors- for detecting occurrences of fungal diseases on a chilly plant. The parametric values are fetched from sensors, which are deployed in the farm and data are transmitted to Arduino Uno (Microcontroller) through wired network. In Thing speak-a cloud platform- where the filtered data is verified and matched with trained data- like temperature value, humidity value, Gaseous concentration and soil moisture value for the prediction. If disparity occurred with respect to predefined threshold value, then notification is sent to the farmer either as a SMS on to the mobile or through push e- mail on to the inbox of the farmer with disease control counter measures.

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PROJECT REPORT

On

"DETECTION OF CHEMICALLY RIPENED BANANA FRUITS BASED ON IMAGE FEATURES USING MACHINE LEARNING"

Submitted by

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ABSTRACT

Fruits are one of the most nutritious as well as naturally available foods, which are generally consumed in raw form. However, in present competitive world, almost 80%fruits are ripened using hazardous chemicals such as Calcium carbide (CaC2) by greedy traders which cause serious health issues. Further, the regular consumption of fruits ripened using Calcium carbide can cause cancer due to the presence of traces of poisonous gases such as Arsenic and Phosphorous. On the other hand, in the existing literature, only less research is carried out towards identification of chemically ripened fruits using computer vision based techniques.

To solve this problem, this project proposes a new framework, which can identify the artificially ripened banana fruits by means of employing different visual features including color, shape and histograms in an integrated manner. The proposed framework is implemented on a real dataset of banana images using neural network based algorithm. The Experimental results in terms of accuracy, cross entropy and confidence level measures demonstrate the efficiency of the proposed system.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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PROJECT REPORT

On

SENTIMENT ANALYSIS OF SMARTPHONE PRODUCT REVIEWS USING SUPERVISED LEARNING METHOD

Submitted by

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ABSTRACT

Now a days, for most of the industries taking up feedback from customers has become a most essential task. From time to time it has great impact on growth of the organization, so, opinion mining plays an immense role in going through the feedback which the customer gives about the products on official sites of organization or on social media. Networking has improved the transparency between the seller and the buyer. Social media has provided platform for people to give their opinion and views regarding various aspects. Sentiment analysis is extremely useful in monitoring the social media and most common text classification tool that analyse the input and tells whether it is positive, negative or neutral. It helps to collect large amount of data systematically and it extracts the subjective information from them. Humans have the indelible ability to determine sentiment which is time consuming process, conflicting and costly in a business context. It is not practical to have people individually read all the reviews of the customer and scores them for sentiment. So to overcome this sentimental analysis model has been developed. In our proposed system we are using weightage classification model along with supervised learning algorithm to analyse the tweets from twitter API and classify based on their respective sentiment.

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PROJECT REPORT

On

CREATING THE KNOWLEDGE BASE USING WIKIPEDIA

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ABSTRACT

Wikipedia is the largest repositories in the Web. The term knowledge base was in connection with the expert systems as it is the part of Artificial Intelligence. A knowledge base can be created for any entity. The existing system like YAGO, MediaWiki tries to convert Wikipedia into a structured database to provide a vast knowledge base across the domains. It is very difficult to get the information which we want across the domains. So, the solution would be to get a systematic automated approach to build a knowledge base using Wikipedia on entity which we are interested in. The proposed system provides a knowledge base built upon the location as its entity. The system is feeded with seed data, by using these seed data it traverses through the Wikipedia graph and builds knowledge base using similarity measurement between seed data and traversed upcoming pages of wiki graph. Any expert AI systems uses gold standard knowledge base to take any decisions.

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PROJECT REPORT

On

"PREDICTING THE RIPENING TIME OF BLACK PEPPER USING ANDROID APPLICATION"

Submitted by

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ABSTRACT

India is an agricultural country and over 58% of income comes through agro-based environment. Out of all the major crops produced in India, the Black pepper production has played a very important role in economic growth of our country. To help improve the production and export of black pepper in India, this study proposes a method to detect the ripening stages of peppercorns. An android application is developed to predict the maturity and ripeness of the peppercorns. This will help the cultivators to produce peppercorns as per global market requirement.

The pepper images, representing various stages of maturity are collected from various agricultural resources. These images are trained and classified by extracting the colour features like RGB value. The training and classification are done using the average RGB and the distance formula and this helps to classify the images into three classes. The images in these classes are used as the dataset to further identify the maturity or ripen stage of the peppercorns in the input image captured by the android application.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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PROJECT REPORT

On

"ANALYZING AND CLASSIFYING THE SOIL TYPES BY ENHANCING 2D IMAGES"

Submitted by

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ABSTRACT

Quantitative techniques for prediction and classification in soil survey are developing rapidly. Classification of soil is the dissolution to soil sets to particular group having a like characteristics and similar manners. Almost all countries do product exporting, in which those countries exporting higher agricultural product are very much depend on the soil characteristics. Thus, soil characteristics identification and classification are very much important. Identification of the soil type helps to avoid agricultural product quantity loss. A classification for engineering purpose should be based mainly on mechanical properties. This paper explains support vector machine-based classification of the soil types. Paper introduces application of Support Vector Machines in the estimate of values of soil properties and soil type classification based on known values of physical properties, texture features and color moments in sampled profiles. Soil classification includes steps like image acquisition, image pre-processing, feature extraction and classification. The texture features of soil images are extracted using the low pass filter, Gabor filter and using colour quantization technique. Mean amplitude, HSV histogram, Standard deviation are taken as the statistical parameters.

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PROJECT REPORT

On

An Efficient Approach for Traffic Monitoring System Using Image Processing

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ABSTRACT

Traffic congestion has become a major problem in the world wide. So we need efficient system which monitors the traffic and updates the time setting in traffic signal. The cameras installed in the road junction will be used to capture the real time traffic and these images will be processed to count the number of vehicles in each lane. MATLAB Platform is used where it develops the various object detection algorithms for the combination of many image processing algorithms. The real time object detection and tracking will be generated by control signals where Arduino programming will provide an interfacing hardware prototype. The centroid value will be calculated in each lane. Based on the centroid values obtained from the system, the signals will be sent for the traffic pole as the output.

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PROJECT REPORT

On

"A REAL TIME SPAM TEXT TWEETS DETECTION USING NEURAL NETWORKS"

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ABSTRACT

Social media platform plays a major role in everyone's day-to-day life activities. With the increased popularity of online social networks, spammers find these platforms easily accessible to trap users in malicious activities by posting spam messages. To stop spammers, Google Safe Browsing and Twitter's BotMaker tools detect and block spam tweets. These tools can block malicious links, however they cannot protect the user in real-time as early as possible. Thus, industries and researchers have applied different approaches to make spam free social network platform. Twitter is one of the vast growing platforms but it is also subjected to attacks such as Spamming and Combat Twitter attacks. The spamming is use of the system to send an unsolicited message, especially the advertisement, sending messages repeatedly on same site which leads to major loss for customers and organization.

In literature, the existing techniques for detecting the twitter spam text tweet suffer due to an issue such as limited work performance and data sets which leads to inefficiency of system. Some of them are only based on user-based features while others are based on tweet based features only. However, there is no comprehensive solution that can consolidate tweet's text information along with the user based features. In order to solve these problems, we proposed a framework to detect the text based spam tweets using Naive Bayes Classification algorithm and Artificial Neural Network. Performance study of these two algorithms shows that Artificial Neural Network performs better than Naive Bayes Classification algorithm.

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