Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Role of Clusters to Understand the Performance of students using Clustering Algorithm	Project Code: ***CS201819-B01***

Abstract:

Learning is a process of understanding the contents to be applicable in the real worlds. The present education system as undergone various changes due the growth of technology and also due to the accreditation of teaching process from the kindergarten state. The present work opens one such issue of changes in education system, which as directly created an impact on the society as well as the individual who as undergone this program, taking this as a consideration the project tries to identify the various views to be considered when designing a curriculum to the student fraternity.

The present project placed a pivotal to take decisions and also the need of certain courses at various level of education. In this context a database of students taking up an engineering program during four academic years 2011-12, 2012-13, 2013-14, 2014-15 from the students of Computer Science with a total number of 60, 61, 56, and 62 respectively and an additional of ten students in lateral entry. The admission to the program (branch as generally called) is done in two different process one after the PUC and another after three years of diploma course in department Computer Science and Engineering. The students have to clear the eligibility test and also based on certain criteria's stipulated from government authorities the student can be admitted.

As per the regulations from the state government the admissions can be done through CET, COMEDK and management (the detained process of admission is not a part this process hence it has not been presented here).

Every student undergoes a specific process late down by the university to get evaluated for this program that is the student has to take up a minimum of two tests out of a three conducted and the maximum internals will be 25 marks. The marks scored by the students will be considered based on the average of two test marks taken. The final marks obtained by the students will be tabulated and entered into the portal of VTU at a stipulated time (generally before the theory examination) similarly the conduction of examination will be done from the concerned university authorities after the completion of sixteen weeks of the semester. The University exams will be conducted for the maximum of hundred marks thus making a total of internal assessment of 25 and university of 100 marks as evaluating parameters.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: CROP RECOMMMENDATION	Project Code:***CS201819-B02***

Abstract:

The proposed project is an attempt to make use of machine learning concept in crop recommendation, by implementing KNN, Naïve Bayes algorithms. Real time soil test report from district agriculture department is collected and used as training data. Testing data is the data that is directly fetched from the soil grids using REST API. By normalizing the raw data implemented by KNN algorithm for crop recommendation and Naïve Bayes algorithm for yield prediction. Hope it finds useful in agriculture which is gaining popularity in India.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Automation of Crop Protection	Project Code:***CS201819-B03***

Abstract:

The project proposal reduces the manpower, saves time and operates efficiently without human interference. Excessive rainfall or scarcity of water, both can damage the crops. The project provides an automatic irrigation machinery which works in accordance with temperature and humidity. Sensors are to be deployed to get the information regarding desired or undesired rain and accordingly the crops can be covered. In the current system, there is no protection for crops against natural disasters. The farmers commit suicide after their crops get destroyed due to natural weather calamities. Only weather updates or alert is given to farmers through media. But there is no exact time alert or system that can protect farmer's crops. Creation of database contains the information related to the soil composites namely moisture, mineral and so on. An automation/simulation model to cover the crops from disasters (natural) in absence of farmer pervasive. In case of heavy rainfall, the farmer sends a signal or a message to start the operations. As soon as the GSM receives the signal using the microcontroller, it activates dc motor such that it starts to cover the polyethene sheet over the crops and agricultural land is protected. The microcontroller has to be used to control this operation using GSM technology which enables the farmer to control the operation from the remote place. Expected Outcomes such as protection of crops against disasters(natural), intelligent sensor based switching gives automatic intimation to farmers and rainwater harvesting.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: A algorithmic to understand the behavior of students based on marks obtained in Direct Assessment	Project Code:***CS201819-B04***

Abstract:

Learning is a process of understanding the contents to be applicable in the real world. The present education system as undergone various changes due the growth of technology and also due to the accreditation of teaching process from the kindergarten state. The present work opens one such issue of changes in education system which as directly created an impact on the society as well as the individual who as undergone this program, taking this as a consideration the project tries to identify the various views to be considered when designing a curriculum to the students fraternity.

The present project placed a pivotal to take decisions and also the need of certain courses at various level of education. In this context a database of students taking up an engineering program during four academic years 2011-12, 2012-13, 2013-14, 2014-15 from the students of computer science with a total number of 60, 61, 56, and 62 respectively and an additional of ten students in lateral entry . The admission to the program (branch as generally called) is done in two different process one after the PUC and another after the three years of diploma course in department of computer science and engineering. The students have to clear the eligibility test and also based on certain criteria's stipulated from government authorities the student can be admitted.

As per the regulations from the state government the admissions can be done through CET ,COMEDK and management (the detained process of admission is not a part this process hence it has not been presented here)

Every student undergoes a specific process late down by the university to get evaluated for his program that is the student has to take up a minimum of two tests out of a three conducted and the maximum internals will be 25 marks . The marks scored by the students will be considered based on the average of two test marks taken . The final marks obtained by the students will be tabulated and entered into the portal of VTU at a stipulated time (generally before the theory examination) similarly the conduction of examination will be done from the concerned university authorities after the completion of sixteen weeks of the semester . The university exams will be conducted for the maximum of hundred marks thus making a total of internal assessment of 25 and university of 100 marks as evaluating parameters.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: MAIDBOT	Project Code: ***CS201819-B05***

Abstract:

The project MaidBot is inspired by Swacch Bharat Abhiyan, which was officially launched on October 2nd 2015. Swacch Bharat Abhiyan is national level campaign by government of India covering 4041 statutory towns clean the streets, roads and infrastructure. It is perhaps the most the basic step towards keeping the diseases at bay. Apart from cleanliness and diseases prevention, Swacch Bharat campaign will also lead to notable economic development for the country.

Using the idea of Swacch Bharat Abhiyan, we are implementing the project called MaidBot, which is an initiation for the betterment of society. This project is built using Arduino circuit. For years, the world of cleaning has been changing as automation and boot controlled tech continues to roll out and make a massive difference to our quality of life and general happiness with the world around us. One of the most innovative improvements has been introduction of the MaidBot is an powerful platform for improving and optimizing the quality of cleaning that we can do without having to lift a finger.

MiadBot is a robotics firm that is looking to help optimize cleaning and make it smarter, simpler and easier. In our project MaidBot is implemented using Arduino circuit, in which we make use of sensors. These sensors are connected to Arduino, which sense the paper particles present on the floor and clean it. We use Arduino scripting language and Arduino IDE software to implement this project.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: High security Question paper generation	Project Code: ***CS201819-B06***

Abstract:

Our Project Entitled "QUESTION PAPER CIRCULATOR WITH BIOMETRIC" is aim to develop an application which is used in the University for having circulation of question papers among colleges safely and at minimum time and will avoid various malpractices being distributed throughout communication session at colleges.

For a millennium, universities have been considered the main societal hub for knowledge and learning. And for a millennium, the basic structures of how universities produce and disseminate knowledge and evaluate students. The means of evaluation of students in our country is based on their performances in exams. A question paper is the basic tool used in the examination. Therefore question paper preparation and circulation to the various colleges is a very important responsibility of universities. Therefore we developed an application which prepares the question papers and circulate to the various colleges without human interactions and securely.

The project entitled **"**Question Paper Circulator with Biometric**"** is minimizes the manual workload and time consumption during question paper circulation. This soft program "Question Paper Circulator with Biometric" is used to send the question paper to colleges through online securely. Our application has three users' admin, paper setter and colleges. In this project, the university staff members save the questions bank of all subjects based on the concepts for all semesters and years. The college principal and observer can download the question paper through online. We provided security for our system by including biometric for login. Principal and Observer should login at same time to download the question paper.

Admin has major tasks of entering subject codes of a various subjects under prescribed courses into application. Later, admin entries the exam time table of subjects along with the subject codes based on morning or afternoon sessions along with date and time for endorsed courses within application. Admin has responsibility to give the login credentials for paper setter. In this application admin makes entry of every colleges and observers into our application, then SMS is distributed to their individual college principal consisting of username, password.

Paper setter gets login to the application through the username and password being sent to them via provided SMS and has a job of preparing the question bank and he has the task to click the button in our application to generate the question paper for various subjects of particular course under specific question paper format.

College principal and observers who got registered into our application needs login to the application for accessing the specific subjects question papers of a course on the day of examination. To download the subjects question paper from application, both the college principal and observers need to login to the application at a time with the given username and password and also must enter the biometric verification to complete login process for downloading the specific question papers.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Prediction of ASD using Machine Learning approach	Project Code:***CS201819-B07***

Abstract:

Autism is characterized by severe and pervasive impairments in several important areas of development: reciprocal social interaction and communication as well as behavior, and imagination. In order to be diagnosed with autism, the behavioral symptoms in all of the above-named areas must be present by age 3. Even if the parents often notice that something is wrong during infancy, it is very difficult to diagnose autism before the age of eighteen months. This is because the behavioral symptoms used to establish the diagnosis have not clearly emerged developmentally until that age.

The majority of children with autism also have a learning disability (mental retardation), although a few have average intelligence. Many also have epilepsy, and visual and hearing impairment are over-represented in this group. Persons with Asperger's syndrome, which is a condition resembling autism, have average or above average intelligence.

Causes: Autism is a behaviorally-defined condition, but is caused by a number of different known and unknown biologically based brain dysfunctions that affect the developing brain's ability to handle information. Autism is a neurodevelopmental disorder. There is a genetic component in many cases. The different way of processing information, such as perceiving, processing and interpreting information, learning new things and behaving in a well-adapted way, leads to the behavioral deviations that can be observed.

What can be done: Autism is a life-long disability. There is currently no known cure for autism. On the other hand, many children with autism can develop significantly with early, well-planned and individually tailored educational efforts in specially adapted settings. One of the primary objectives is to help the child develop functional communication. The educational approaches must focus on knowledge about the unique ways that children with autism learn. Various ABA strategies (Applied behavior analysis) as well as the structured teaching method in the TEACCH-model (Treatment and Education of Autistic and related Communication Handicapped Children) are examples of such specially-tailored educational strategies for persons with autism. Early identification, assessment and diagnosis are the first step. The next step is to provide accurate information for, and education of, parents and other concerned persons as soon as possible. These, together with promptly applied supportive measures that are both well-planned and individually tailored, are the long-term basis for being able to help the child to develop. A specially adapted nursery school and subsequent schooling are important prerequisites for the child; similarly an adapted home environment and daily activities are equally important for the adults. Adolescents and adults may need continued access to educational measures to further develop skills that aim to increase independence and participation, even if these measures had been introduced early. High-functioning persons may require different types of assistance in organizing their studies and access to various forms of tailored daily activities. As adults, and for the rest of their lives, most persons with autism are in need of extensive assistance and support. However, some persons may become relatively independent.

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Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: SMART CITY	Project Code: ***CS201819-B08***

Abstract:

A college accounting system, sponsored programs administrators in colleges and universities operate in a demanding financial and regulatory environment. Today they are often forced to meet these demands with limited staffing and use ERP and other internal systems that were designed for other business purposes. Since 1987, IT Resources has been working with administrators at small to mid-size colleges and universities to overcome these obstacles. We have developed a comprehensive grant and financial management solution with the power and flexibility to tackle the most complex environments was college accounting system, sponsored programs administrators in colleges and universities operate in a demanding financial and regulatory environment. Today they are often forced to meet these demands with limited staffing and use ERP and other internal systems that were designed for other business purposes. Since 1987, IT Works has been working with administrators at small to mid-size colleges and universities to overcome these obstacles. We have developed a comprehensive grant and financial management solution with the power and flexibility to tackle the most complex environments while maintaining the affordability required by small, predominately undergraduate institutions. while maintaining the affordability required by small, predominately undergraduate institutions.

Guide	**Team Members**			
				
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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Android Application for Crop Disease identification using Image Processing	Project Code:***CS201819-B09***

Abstract:

INTRODUCTION

Every living being depends on agriculture for food. But for optimum yield, the crops should be healthy therefore some highly technical method is needed for periodic monitoring. Crop disease is one of the important factor where it can cause significant reduction of quality and quantity of agriculture products. Due to crop disease at Georgia in the year 2011, losses are approximately $823.4 million. The value of the crops used in this estimate was approximately $6285.1 million, resulting in a 13.1% total percent disease loss across all crops. About 185 million USD was spent on controlling the diseases, and the rest is the value of damage caused by the diseases

Data mining is a process to get the meaningful data from the large data scattered in large data repository. By using different tools and techniques, right information is provided for data mining process. It is popularly known as information or knowledge discovery, which is one of the recent trends found to be useful in several complex fields. It is the process of evaluating data from different outlooks and summarizing it into useful information that can be used to identify the symptom of different diseases in Crop. Using data mining Crop data set can be analyzed

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GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: TRAVEL ASSISTANT	Project Code:***CS201819-B10***

Abstract:

Tourism comprises the activities of persons travelling to and staying in places. It includes travelers living outside their usual environment. It helps in accommodating and entertaining tourists. Tourism may be international or within the traveler's country. It is a collection of services and industries which deliver a travel experience comprising transportation.

The criteria which are used simultaneously in order to characterize a trip.

1 It involves displacement outside the usual environment.

2 Travelling is for recreation and visiting places, family and friends.

The scope of this project is helping the potential tourists to discover places to visit when planning a vacation to a touristic region. In an android app the travelers can register themselves and get the facilities such as hotels, cabs and other touristic packages. The travelers can easily know the history of the monuments without the interference of the guide through an app. The description of the places is given through audio clipping when the travelers clicks the image of the monuments.

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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: The Integrity and Authentication of Weather data observation using Identity based Encryption	Project Code:***CS201819-B11***

Abstract:

Weather forecasting is the application of science and technology to predict the state of atmosphere for a given location. Weather forecasts are made by collecting quantitative data about the current state of atmosphere at a given place using scientific understanding of atmospheric processes to project how the atmosphere will change. Weather forecasting is one of the hardest and complicated things scientists do on daily basis. Weather forecasting, the prediction of the weather through application of the principles of physics, supplemented by a variety of statistical and empirical techniques. We use cryptographic technique like identity based encryption.

Weather information provides a safe working environment by contributing to the economic activity of the nation, and plays role of the prevention of natural disasters, which can cause large scaled casualties and damage of property. Especially during times of war, weather information plays a more important role than strategy, tactics and information about trends of the enemy. A plan to safely transmit the measured value from meteorological sensors through a meteorological telecommunication network in order to guarantee the confidentiality and integrity of the data despite cyber-attacks. Also, such a plan allows one to produce reliable weather forecasts by performing mutual authentication through authentication devices. To make sure of this, one can apply an Identity Based Signature to ensure the integrity of measured data, and transmit the encrypted weather information with mutual authentication about the authentication devices.

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Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Performance Evaluation of Convolution Neural Networks	Project Code:***CS201819-B12***

Abstract:

In machine learning, a convolutional neural network (CNN) is a clas of deep, feed-forword artificial neural networks, most commonly applied to analyzing visual imaginary.

Convolutional networks were inspired by biological processes in that the connectivity pattern between neurons resembles the organization of the animal visual cortex. Individual cortical neurons respond to stimuli only in a restricted region of the visual field known as the respective field.

Visual recognition, in the context of machine vision, is the ability of software to identify objects, places, people, writing and actions in images. Computers can use machine vision technologies in combination with a camera and artificial intelligence software to achieve image recognition.

Computer vision has become ubiquitous in the society, with applications in search, image understanding, apps, mapping, medicine, drones, and self-driving cars. Core to many of these applications are visual recognition tasks such as image classification, localization and detection. Recent developments of these state-of-the-art visual recognition systems. This project is to implement different learning algorithms and compare the accuracy of the outputs.

Image classification is the task of assigning an input image one label from a fixed set of categories. This is one of the core problems in computer Vision that, despite its simplicity, has a large variety of practical applications. Moreover, many other seemingly distinct Computer Vision tasks (such as object detection, segmentation) can be reduced to image classification.

Core to many of the applications like image understanding, apps, mapping, medicine, drones, and self-driving cars are visual recognition tasks such as image classification, localization and detection. Recent developments in neural network (aka “deep learning”) approaches have greatly advanced the performance of these state-of the-art visual recognition systems. This project is to evaluate the performance of convolutional neural network technique for visual recognition.

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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Mobile Health Care Monitoring Kit	Project Code:***CS201819-B13***

Abstract:

Health is one of the global challenges for humanity. The prime goal has to develop a reliable patient monitoring system so that the healthcare professionals can monitor the patients who are either hospitalized or executing their normal daily life activities.

Recently the patient monitoring system is one of the major advancement because of its improved technology.

Currently there is need for a modernized approach. In the traditional approach the healthcare professionals play the major role. They need to visit the patients ward for necessary diagnosis and advising .To improve this we can make use of technology in a smarter way.

A patient monitoring system is an extension of a hospital medical system where a patient's vital body state can be monitored remotely. Traditionally the detection systems were only found in hospitals and were characterized by huge and complex circuitry which required high power consumption. Continuous advances in the semiconductor technology industry have led to sensors and microcontrollers that are smaller in size, faster in operation, low in power consumption and affordable in cost. These sensors are in contact with the human body and monitor his/her physiological parameters.

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Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: Advanced Electronic Voting Machine	Project Code:***CS201819-B14***

Abstract:

An election is a formal group decision-making process by which a population chooses an individual to hold public office. Elections have been the usual mechanism by which modern representative democracy has operated since the 17th century. Elections may fill offices in the legislature, sometimes in executive and judiciary, and for regional and local government.

In 1980, M.B. Haneef invented the first Indian voting machine. Electronic Voting Machines (EVM) are being used in Indian General and State Elections to implement electronic voting in part from 1999 elections and also in use till date. EVMs have replaced paper ballots in local, state and general (parliamentary) elections in India. Traditionally, voting machine has been defined by the mechanism the system uses to cast votes.

Advanced electronic voting machine includes more security and perfection. This machine avoids manual documentation. Whichever the place it may be a person can be able to vote at the time of elections.

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GM INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title: RFID Based shopping and Billing	Project Code:***CS201819-B15***

Abstract:

There is huge change in technology, so the rate of people of all ages attracted towards electronic gadgets is increasing. In different type of industries the electronic devices like smart card reader, barcode and RFID scanner having more usage. This type of gadgets also required in supermarkets. In the existing, in the mall every person takes product put into trolley. After the shopping is done that person have to stand in the queue for billing. In the billing process a sell person scan barcode of each and every product and gives the final bill. This process is very time consuming and it becomes worst on holidays, special offers or weekends.

To overcome that we have been developing a smart way for shopping in malls. Each and every product has RFID tag instead of barcode. The smart trolley will have RIFD reader LCD display. When a person put any product in the trolley it will scan and the cost, name and expire date of the product will display. Cost will add into final bill. Bill will be stored in microcontroller memory. It will transfer from RF transmitter to RF receiver. Trolley module will transfer this information to the billing counter through wireless communication.

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