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SOFTWARE PROJECT TITLED

"E-Mentoring System"

A Dissertation Submitted to Bangalore University in Partial Fulfillment for the Award of the Degree of 5th Semester

Bachelor of Computer Application

Submitted by

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Under the Guidance of

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2021 – 2022

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INTRODUCTION

Chapter 1

INTRODUCTION

1.1 Brief Introduction of the project

In most educational institutions counselling of the student is taken manually. It is not only time consuming, but it is also unsecure and unreliable and it can be lost. Some institutions are using mentoring book for while this will be difficult for teachers to keep track of the problems of students which they are facing because by using mentoring book the students are fail to share their problem in time with the mentor intern it effects on performance as they are not regularly meeting their mentors. To overcome these problems, I have developed a better system which is Web based; it is fully responsive where a user can use in mobile, tablets and different computer systems. In this system records are kept safe and secure and the performance information of particular or all students of particular class can be accessed easily and without time consuming, the report is generated automatically.

1.2 Purpose of the project

The main characteristics of our developed system are that it is web based, fully responsive and flexible. It can be accessed from any computer no matter where you are. Its purpose is to make web-based e-counselling software for department to register the student details; their subjects, teachers, and related field. The mentors will counsel the students weekly to solve the problem come across during their course of study, this is a continuous process till the end of academic career of the student. During the last semester of study students are advised for higher studies along with proper career guidance.

1.3 Objectives

Monitor the student's regularity & discipline. To enable the parents to know about the performance & regularity of their wards. Improvement of teacher student relationship. Counseling students for solving their problems and provide confidence to improve their quality of life. Guiding students to choose right career path for job, higher studies, Entrepreneurship, etc.

1.4 Existing System

The Existing system is a manual entry for the students. Here the mentoring book will be carried out in the hand written. It will be a tedious job to maintain the record for the user. The human effort is more here. The retrieval of the information is not as easy as the records are maintained in the hand written. This application requires correct feed on input into the respective field. Suppose the wrong inputs are entered, the application resist to work. So, the user finds it difficult to use.

Disadvantages of Existing System

- Paper work is needed
- Manual entry is needed
- It consumes lot of time to make any kind of entries
- It is very difficult to make any changes to the entries

1.5 Proposed System

To overcome the drawbacks of the existing system, the proposed system has been evolved. This project aims to reduce the paper work and saving time to generate accurate results of the student's performance. The system provides with the best user interface. The efficient reports can be generated by using this proposed system.

Advantages of Proposed System

- It is trouble-free to use
- It is a relatively fast approach to enter performance of the student
- Is highly reliable, approximate result from user
- Best user Interface
- Efficient
- Eliminates paper work

1.6 Modules

There are three Modules,

- Admin: Admin is responsible to keep track of faculty and student modules, their registration details, the allotment of student to their respective faculty members.
- Faculty: In this module, a faculty is registered with their details, they receive a list of students who are assigned to them, they should enter their opinion about a student's performance and remarks.
- Student: Students register with their details, then students should provide their marks and the activities in which they participated which is to be entered in a form. This form is sent to be reviewed by their respective faculty. Using all these information student reports are generated.

SYSTEM ANALYSIS

Chapter 2

SYSTEM ANALYSIS

2.1 Introduction

Analysis can be defined as breaking up of any whole so as to find out their nature, function etc. It defines design as to make preliminary sketches or to sketch a pattern or outline for plan. To plan and carry out especially by artistic arrangement or in a skill full wall. System analysis and design can be characterized as a set of techniques and processes, a community of interests, a culture and an intellectual orientation.

The various tasks in the system analysis include the following.

- Understanding application.
- Planning.
- Scheduling.
- Developing candidate solution.
- Performing trade studies.
- Performing cost benefit analysis.
- Recommending alternative solutions.
- Selling of the system.
- Supervising, installing and maintaining the system.

This system manages to the analysis of the report creation and develops manual entry of the student performance. First design the student's registration form, staff registration forms, student allotment, counsellor allotment etc. This project will help the e-counselling system for the department calculate performance of every student in academic year. The application will provide flexible report for all students.

2.2 Feasibility Study

Feasibility analysis begins once the goals are defined. It starts by generating broad possible solutions, which are possible to give an indication of what the new system should look like. This is where creativity and imagination are used. Analysts must think up new ways of doing things generate new ideas.

There is no need to go into the detailed system operation yet. The solution should provide enough information to make reasonable estimates about project cost and give users an indication of how the new system will fit into the organization.

It is important not to exert considerable effort at this stage only to find out that the project is not worthwhile or that there is a need significantly change the original goal. Feasibility of a new system means ensuring that the new system, which we are going to implement, is efficient and affordable. There are various types of feasibility to be determined. They are,

2.2.1 Economically Feasibility:

Development of this application is highly economically feasible. The only thing to be done is making an environment with an effective supervision. It is cost effective in the sense that has eliminated the paper work completely. The system is also time effective because the calculations are automated which are made at the end of the month or as per the user requirement.

2.2.2 Technical Feasibility:

The technical requirement for the system is economic and it does not use any other additional Hardware and software. Technical evaluation must also assess whether the existing systems can be upgraded to use the new technology and whether the organization has the expertise to use it. Install all upgrades framework into the .Net package supported widows-based application. This application depends on Microsoft office and intranet service, database. Enter their attendance and generate report to excel sheet.

2.2.3 Operational Feasibility:

The system working is quite easy to use and learn due to its simple but attractive interface. User requires no special training for operating the system. Technical performance includes issues such as determining whether the system can provide the right information for the Department personnel student details, and whether the system can be organized so that it always delivers this information at the right place and on time using intranet services. Acceptance revolves around the current system and its personnel.

2.3 Frameworks

2.3.1 Bootstrap

Bootstrap is front-end framework and collection of tools and mechanisms for building web applications. It consists of HTML and CSS based design templates for navigations, forms, buttons, typography, and other interface elements, and also JavaScript extensions.

Bootstrap is free and open source, and its purpose is to make easy the development of dynamic websites and web applications. Bootstrap was developed by Mark Otto and Jacob Thornton and named Twitter Blueprint. Before Bootstrap framework, designers were using different libraries for interface development, which had many inconsistencies and their maintenance were difficult. On 31 Jan, 2012, Bootstrap 2 was released. This framework has brought many changes to the existing components and, also, added 12 column grid layout and responsive design constituents. On August, 19, 2013, Bootstrap 3 was announced, which moved to first approach of mobile and using a flat design.

2.3.2 JavaScript Framework (JQuery)

JQuery is JavaScript library intended to make simple the client-side scripting of HTML. It is the most popular JavaScript framework, which is free and open-source software licensed under the MIT License.

Several of the largest companies including,

- Google
- IBM
- Microsoft and
- Netflix are using the JQuery

2.3.3 Semantic UI

It is a development framework which is very helpful in building responsive and beautiful layouts utilizing human friendly HTML. In this framework the words and classes are treated as interchangeable concepts.

In Semantic UI framework, the Classes use syntax from natural language like plurality, the word order, and noun or modifier relationships to connect and join concepts naturally and instinctively.

2.3.4 Web Template

A website template (web template) is a pre designed webpage which any developer can use to plug-in their own text and text and script component and images into that to create a website. Website Templates are generally built with HTML and CSS code. By using web templates everyone is allowed to setup a website without hiring a professional web designer or developer. This brings the facility for anyone to create a logically priced business, personal web that may be listed in search engines thus users can seek for your particular service.

SYSTEM REQUIREMENTS AND SPECIFICATION

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SOFTWARE PROJECT TITLED

"SKYBEAT -THE MUSICAL WORLD"

A DissertationSubmitted to Bangalore University in Partial Fulfillment for the Award of the Degree of5th Semester

Bachelor of Computer Application

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INTRODUCTION

CHAPTER 1

INTRODUCTION

1.1 OBJECTIVE:

The Skybeat - The Musical World is web application software being designed and developed to meet the needs of sales, distribution and customer service in an E-Commerce company. Using this web application, the real time scenario of the stock maintenance, dispatch and delivery status can be obtained. This will improve the customer satisfaction and sales scale of the organization.

Major Modules:

- Admin
- Customer

Functionalities of Modules:

- **Admin can perform the following operations:**
  - Stock Addition
  - Updating the stock details
  - Processing orders
  - Preparation of dispatch summary
- **Customers have the following privileges:**
  - Obtaining membership
  - Navigating the products gallery
  - Choosing products and adding to cart
  - Payment through credit card
  - Viewing order status
  - Changing password

CHAPTER 2

SOFTWARE REQUIREMENT ANALYSIS

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Analysis begins when a developer begins a study of the program using existing system. During analysis, data are collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Flow Diagram, interviews, etc. Training, experience and common sense are required for collection of relevant information needed for the development of the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution. A good analysis model should provide not only the mechanisms of problem understanding but also the frame work of the solution. Thus, it should be studied thoroughly by collecting data about the system. Then the proposed system should be analysed thoroughly in accordance with the needs.

2.1 PRESENT SYSTEM

The existing system is functionally compatible with the process logic, but lacking in certain operations both at the merchant and customers side that must be included in the system for the changing business models. The sales module and the order tracking are not automated. Usually, the e-commerce websites do not provide with the order tracking. The customers will have to register for the same with customer support team and make phone calls to know the system. In this type of order tracking the customers face lots of hardships in getting connected and to talk to the executive for knowing the status. Also, the sales related operations in stock maintenance require the automation.

2.2 PROPOSED SYSTEM

In the proposed system, the drawbacks of existing system are overcome. The customer support for order tracking is done through one of the web modules, so that customers can track the order status through the web pages. The numerous phone calls and endless waiting is eliminated. All other operations are typical web commerce oriented, so system functionality is well understood. The development and usage of this application is really interesting on.

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A Dissertation Submitted to Bangalore University in Partial Fulfillment for the Award of the Degree of 5th Semester

Bachelor of Computer Application

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Chapter 1

Introduction

1.1 Overview Of The Project

The Aptitude Based Career Guidance Project provides an easy way to identify careers that use your preferences and aptitiude skills.It also incorporates other traits such as interests and values. This provides a realistic and effective shortcut in focusing career exploration.

The project allows faculties to create their own tests. It enables educational institutes to perform tests, quiz and create feedback forms. It asks faculty to create his/her set of questions. Further, the tests are associated with specific courses so that only associated students can appear for the test. The result of the response will be available to the faculty of the question set as well as the user/student. This project is helpful for creating practice tests, say for educational institutes and as a feedback form.

1.2 Objective

Often times, students are confused about what lies ahead of them after their education, so they either become too anxious about it, or keep postponing the thoughts of choosing their career, or in the worst case scenario, completely ignore it.

So,in order to select the best career according to their capability, they need to receive some sort of guidance, which may cost a lot of money.The career choice aptitude test aims to provide the best career option for students who are seeking guidance about their professional life that lies ahead of them. This test carefully considers the choices in order to choose the best career option, in the fastest way possible.

1.3 Existing System

The existing system consists of manual counselling, where users may have to pay for career advice, and may take a longer duration of time. Therefore, users may be hesitant to approach this system, as it may not have the requirements to know the preferences of the users, or the full extent of their capabilities.

Disadvantages:

- System does not help user to select their career based on their preferences
- System may be expensive
- System may or may not allow the user the freedom of choice.

1.4 Proposed System

The new system will allow the users to choose their preferences and assess their capabilities, and provide the best possible career choice, in a shorter amount of time. The users will have to select a set of preferences that will determine the best possible career for them.

Advantages:

- System helps user to select their career based on their preferences.
- System guides user properly on which career to select according to their capability.
- System will allow the user to have the freedom of choice.
- System is free of cost.

1.5 Scope

This project would be very useful for educational institutes where regular evaluation of students' is required. Further it can also be useful for anyone who requires feedback based on objective type responses

1.6 Modules

The project contains 2 modules:

Admin Module:- Super user who manages questions,careers,users and details

User Module:- The user can take the test ,view results, and can edit personal details

Chapter 2

Requirements And Specifications

2.1 Hardware Requirements

Processor: Intel Pentium IV 2.4 GHz.

RAM: 512 Mb

Hard Disk: 40 GB

Monitor: 15 VGA Colour

2.2 Software Requirements

Operating System: Windows 7/8/10

Coding Language: Java

IDE: Netbeans 7.4

Database: MySQL Server 5.0

2.3 Introduction to Netbeans

NetBeans IDE is a free, open source, integrated development environment (IDE) that enables you to develop desktop, mobile and web applications. The IDE supports application development in various languages, including Java, HTML5, PHP and C++.

The IDE provides comprehensive support for JDK 7 technologies and the most recent Java enhancements. It is the first IDE that provides support for JDK 7, Java EE 7, and JavaFX 2. The IDE fully supports Java EE using the latest standards for Java, XML, Web services, and SQL and fully supports the Apache Tomcat Server.

2.4 Introduction to MySQL

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons :

- MySQL is released under an open-source license. So you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

2.5 JSP

JSP is a technology for developing web pages that supports dynamic content which helps developers insert java code in HTML pages by making use of special JSP tags, most of which start with . A Java Server Pages component is a type of Java servlet that is designed to fulfill the role of a user interface for a Java web application. Web developers write JSPs as text files that combine HTML or XHTML code, XML elements and embedded JSP actions and commands.

2.6 HTML

HTML stands for HyperText Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages.

A markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g. HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text.

2.7 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a simply designed language intended to simplify the process of making web pages presentable.

CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page. CSS is easy to learn and understand, but it provides powerful control over the presentation of an HTML document.

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JavaScript can be used for Client-side developments as well as Server-side developments.JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

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CERTIFICATE

This is to certify that the Software Project Entitled

"Emotion Recognition of Textual Tweets using Voting Classifier (LR-SGD)"

Has been submitted in partial fulfillment of the requirement for the award of the degree

Bachelor of Computer Application

Is a result of the bonafide work carried out by

Chethana J Murthy(19PZSB7015)

During the Academic Year 2021 – 2022

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SOFTWARE PROJECT TITLED

"Emotion Recognition of Textual Tweets using Voting Classifier (LR-SGD)"

A Dissertation Submitted to Bangalore University in Partial Fulfillment for the Award of the Degree of 6th Semester

Bachelor of Computer Application

Submitted by

Chethana J Murthy (19PZSB7015)

Under the Guidance of

Ms. Reshma B

Assistant Professor and HoD, Department of Computer Science

2021 – 2022

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This is to certify that Chethana J Murthy (19PZSB7015) has satisfactorily completed the project work of VI semester BCA entitled "Emotion Recognition of Textual Tweets using Voting Classifier (LR-SGD)" in partial fulfillment of the academic requirement for the award of the degree in Bachelor of Computer Application by Bangalore University 2021 – 2022.

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Guide: Ms.Reshma B

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INTRODUCTION

Chapter-1

INTRODUCTION

1.1 Introduction to Project

The proliferation of user-generated content on social media has made opinion mining an arduous job. As a microblogging platform, Twitter is being used to collect views about products, trends, and politics. Sentiment analysis is a technique used to analyze the attitude, emotions and opinions of different people towards anything, and it can be carried out on tweets to analyze public opinion on news, policies, social movements, and personalities. By employing Machine Learning models, opinion mining can be performed without reading tweets manually. Their results could assist governments and businesses in rolling out policies, products, and events. Seven Machine Learning models are implemented for emotion recognition by classifying tweets as happy or unhappy. With an in-depth comparative performance analysis, it was observed that proposed voting classifier (LR-SGD) with TF-IDF produces the most optimal result with 98.8% accuracy and 81% F1 score. To further validate stability of the proposed approach on two more datasets, one binary and other multi-class dataset and achieved robust results.

1.2 Objective of Project

The main objective of Emotion Recognition of Textual Tweets using Voting Classifier is to increase data accuracy and recognize the emotion behind the tweets to help understand the true intent of the tweet.

1.3 Scope of the Project

Twitter is a micro-blogging platform that is used to collect views of products, trends and politics. Sentiment Analysis is used to analyze attitude, emotions and opinions of different people on different topics. This can be used by government, police, business ventures, marketing or anyone who is interested in analyzing sentiments of textual tweets.

1.4 Existing System

1. Parveen and Pandey studied sentiment analysis on Twitter dataset that uses NB algorithm. Analyst use Hadoop Framework for preparing film informational collection which is reachable on Twitter site as reviews, input and opinions. Sentiment analysis on Twitter data is explored in three classes that are positive, negative and neutral.

2. Alomari et al. analysed SVM utilizing TF-IDF. The study presented the Arabic Jordanian Twitter corpus where Tweets are explained seeing that any positive or negative. It researched distinctive directed machine learning opinion examination classifiers when applied to Arabic client's online life of general subjects that are found in either Modern Standard Arabic (MSA) or Jordanian tongue. Analyses were conducted to assess the utilization of various weight plans, stemming and N-grams terms strategies and situations.

Limitations of Existing System

- Recently, social media platforms such as Twitter have generated enormous amounts of structured, unstructured and semi-structured data. One of the most recent examples is COVID-19 infodemic that shows misinformation in social media can be far more important and devastating than a disaster such as a pandemic.
- RF works on bootstrap samples and if samples are not fully representatives, prediction can be inaccurate.
- GBM converts weak learners to strong learners and it is sensitive to noise and outliers. If it gets trained on weak learners due to noisy data which can cause overfitting problem.

1.5 Proposed System

1. In the system, different techniques have been used for methodology in ML for its objectives. Versatile experiments were examined using different methods and techniques. Multiple classifiers applied on the dataset, but the Voting classifier is an ensemble of Logistic Regression and Stochastic Gradient Descent outperforms than all other ML models in terms of accuracy, recall, precision and F1-score.

2. Twitter dataset used in the experiment is scrapped from Kaggle repository. First the dataset is pre-processed by removing unwanted data. Then, the data was split into two sets: training set and testing set. The training set was given the percentage of 70% while the test set portion is 30%. After that feature engineering techniques are applied on the training set. Multiple machine learning classifiers are trained on the training set and tested using the test set. The evaluation parameters used in this experiment are: (a) Accuracy (b) Recall (c) Precision (d) F1-score.

Advantages of Proposed System

1. Voting Classifier as an ensemble of Stochastic Gradient Descent and Logistic Regression gives highest accuracy.
2. A Voting Classifier displays best outcome when it works with Stochastic Gradient Descent and Logistic Regression and provides maximum accuracy.
3. Proposed model achieved the highest recall and f1 score.

REQUIREMENT SPECIFICATION

Chapter-2

REQUIREMENT AND SPECIFICATION

2.1 Software Tools Specification

a) MySQL

MySQL is the most popular open source relational SQL database management system. MySQL is one of the best RDBMS being used for developing web-based software applications.

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed, and supported by MySQL AB, which is a Swedish company.

Characteristics of MySQL:

- MySQL is free to use, as it is released under an open-source license.
- MySQL handles a large subset of functionality of most expensive and powerful database packages.
- It uses a standard form of well-known SQL data language.
- MySQL works on many operating systems and with many languages including C, C++, JAVA, PHP, etc.
- It works very quickly and well even with large data sets.
- MySQL is customizable. The open-source GPL license allows programmers to modify MySQL software to fit their own specific environments.

b) Machine learning language

Machine Learning is a system of computer algorithms that can learn from example through self-improvement without being explicitly coded by a programmer. Machine learning is a part of artificial Intelligence which combines data with statistical tools to predict an output which can be used to make actionable insights.

The breakthrough comes with the idea that a machine can singularly learn from the data (i.e., example) to produce accurate results. Machine learning is closely related to data mining and Bayesian predictive modelling. The machine receives data as input and uses an algorithm to formulate answers.

c) HTML AND CSS

HTML stands for Hypertext Markup Language and CSS stands for Cascading Style Sheets are the crucial technologies for creating web pages together with scripting and graphics, HTML and CSS are the fundamental of building Web Applications and Web pages. HTML provides designers and developers to design forms for directing transactions with remote services, for use in making reservation, searching for information, ordering products, and others retrieving online information through hypertext links and to include video and sound clips, spread sheets, and other applications straight in their documents.

CSS describes the Web pages presentation, involving layout, colors, and fonts. CSS helps the designer to adjust the presentation to various types of devices, like a small screens, large screens, or printers. CSS is separate from HTML, and their separation makes it easy to preserve and maintain sites, share style sheets across pages.

2.2 Hardware Requirements

- System : Pentium i3 Processor.
- Hard Disk : 500 GB.
- Monitor : 15'' LED
- Input Devices : Keyboard, Mouse
- Ram : 4 GB

2.3 Software Requirements

- Operating system : Windows 10.
- Coding Language : Python
- Web Framework : Flask

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Under the Guidance of

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Head of the Department, Computer Science

2021 – 2022

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Place: Bangalore

Date:

Guide: Reshma B

1.6 Modules

The project contains 1 module:

Admin Module: - Super user who uploads the necessary data and predicts the future crime occurrences using Machine Learning.

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During the Academic Year 2021 – 2022

5/9/2022

Signature of the Guide

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Principal

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2)

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INTRODUCTION

Chapter 1

Introduction

1.1 Overview of The Project

In this era of recent times, crime has become an evident way of making people and society under trouble. An increasing crime factor leads to an imbalance in the constituency of a country. In order to analyses and have a response ahead this type of criminal activities, it is necessary to understand the crime patterns. The study imposes one such crime pattern analysis by using crime data obtained from Kaggle open source which in turn used for the prediction of most recently occurring crimes. The major aspect of the work is to estimate which type of crime contributes the most along with time period and location where it has happened. One of the machine learning algorithm, "Random Forest Classifier", is implied here in order to classify among various crime patterns and the accuracy achieved was comparatively high when compared to precomposed works.

1.2 Objective

The major aspect of this project is to estimate which type of crime contributes the most along with time period and location where it has happened. The web application helps the crime department by predicting the future crime occurrences, and also helps to control the rise in crime factors.

1.3 Existing System

In existing system, the dataset obtained from the open source are first pre-processed to remove the duplicated values and features. Decision Tree has been used in the factor of finding crime patterns and also extracting the features from large amount of data is inclusive. It provides a primary structure for further classification process.

Disadvantages:

- The pre-existing system is low on accuracy since the classifier uses a categorical value which produces a biased outcome for the nominal attributes with greater value.

- The classification techniques does not suited for regions with inappropriate data and real valued attributes.
- The value of the classifier must be tuned and hence there is a need of assigning an optimal value

1.4 Proposed System

The model is trained and tested by dataset. It is then followed by mapping. The crime type, year, month, time, date, place is mapped to an integer for ensuring classification easier. The independent effect between the attributes are analyzed initially by using Random Forest Classifier. The crime features are labelled that allows to analyze the occurrence of crime at a particular time and location. Finally, the crime which occur the most along with spatial and temporal information is gained.

The performance of the prediction model is find out by calculating accuracy rate and the language used in designing the prediction model is python and run on data analysis and machine learning model.

Advantages:

- The proposed algorithm is well suited for the crime pattern detection since most of the featured attributes depends on the time and location.
- It also overcomes the problem of analyzing independent effect of the attributes.
- The initialization of optimal value is not required since it accounts for real valued, nominal value and also concern the region with insufficient information.
- The accuracy has been relatively high when compared to other machine learning prediction model.

1.5 Scope

The application would be very useful for Crime Analysis and Future Crime preventions and occurrences where an individual can analyze the previous data using Machine Learning and predict the future crimes and take necessary measures.

REQUIREMENTS AND SPECIFICATIONS

Chapter 2

Requirements And Specifications

2.1 Hardware Requirements

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RAM: 512 GB

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Monitor: 15 VGA Colour

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Frame Work: Flask

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Machine Learning is a system of computer algorithms that can learn from example through self-improvement without being explicitly coded by a programmer. Machine learning is a part of artificial Intelligence which combines data with statistical tools to predict an output which can be used to make actionable insights. Machine learning is also used for a variety of tasks like fraud detection, predictive maintenance, portfolio optimization, automatize task and so on.

2.4 Introduction to Python

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability

and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

2.5 HTML

HTML stands for Hypertext Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages.

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JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

2.8 Flask

Flask is a micro web framework written in Python. It is classified as a microframework because it does not require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions.

However, Flask supports extensions that can add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools.

2.9 Decision Tree Algorithm

Decision Tree is the most powerful and popular tool for classification and prediction. A Decision tree is a flowchart-like tree structure, where each internal node denotes a test on an attribute, each branch represents an outcome of the test, and each leaf node (terminal node) holds a class label.

2.10 Random Forest Algorithm

Random Forest is a popular machine learning algorithm that belongs to the supervised learning technique. It can be used for both classification and regression problems in Machine Learning. It is based on the concept of ensemble learning, which is a process of combining multiple classifiers to solve a complex problem and to improve the performance of the model.Random Forest is a classifier that contains a number of decision trees on various subsets of the given dataset and takes the average to improve the predictive accuracy of that dataset. Instead of relying on one decision tree, the random forest takes the prediction from each tree and based on the majority votes of predictions, and it predicts the final output. Random Forest is capable of performing both classification and regression tasks. It is capable of handling large datasets with high dimensionality. It enhances the accuracy of the model and prevents the overfitting issues

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This is to certify that the Software Project Entitled

"*Seeding Agriculture Robot*"

Has been submitted in partial fulfillment of the requirement for the award of the degree

Bachelor of Computer Application

Is a result of the bonafide work carried out by

Kavyashree CG(19PZSB7029)

During the Academic Year 2021 – 2022

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SOFTWARE PROJECT TITLED

"Seeding Agriculture Robot"

A Dissertation Submitted to Bangalore University in Partial Fulfillment for the Award of the Degree of 6th Semester

Bachelor of Computer Application

Submitted by

Kavyashree CG(19PZSB7029)

Under the Guidance of

Ms. Kanchan S

Assistant Professor, Department of Computer Science

2021 – 2022

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Place: Bangalore

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Guide: Ms. Kanchan S

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1.4 Working

Automation in seeding operation provides the accuracy in these spatial distance requirements of crops than traditional methods. Spatial requirement for each crop must be satisfied to have equal access of air, light, ground moisture, etc. Seed sowing in proposed system is as follows: dropping of seeds in the hole, covering it by soil and then pouring water on it.

1.5 Existing System

In India generally the traditional seed sowing methods includes the use of animal drawn funnel and pipes driller or drilling using tractor.

Earlier method requires labor and a very time and energy consuming.

Which are detrimental to health and work performance.

1.6 Disadvantages of existing system

- Time consumption high
- Expensive
- Labors are required

1.7 Proposed system

In this project we are going to present about the Automatic Farming Robot designed for agriculture purposes. It is designed to minimize the labor of farmers in addition to increasing the speed and accuracy of the work.

1.8 Advantages of proposed system

- Cost is low
- No need of labors
- We can consume time
- Save energy

Fig 2.3.4 DC Motor

2.3.5 DC Motors drivers

Dc motor drives are defined as amplifiers or power modules that interface between a controller and a dc motor.

There convert steep and direction input from the controller to currents and voltages compactable with motor

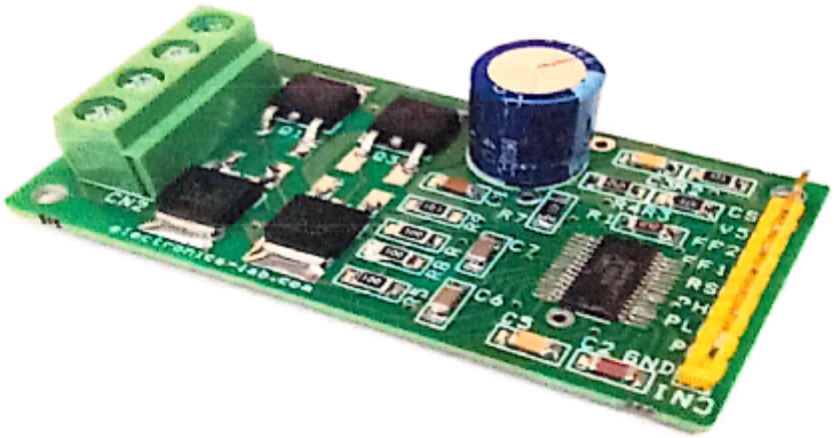

Fig 2.3.5 DC Motor drivers

2.3.6 Battery

An electric battery is a source of electric power consisting of one or more electro chemical cell with external connection for powering electrical devices

When a battery is a battery is supplying power its positive terminal is the and negative terminals is anode

Fig 2.3.6 Battery

2.3.7 Battery Specification

Dimension (Body)	150*64*92 mm
Weight	1 kg
Dimension (Battery terminals)	4.8*0.8 mm
Voltage	12V DC
Capacity	3Ah
Technology	Seal lead acid
Cycle use	14.5 to 14.9V DC
Stand by use	1.6 to 13.8V DC
Initial current	< 2.8 A
Stand by charge voltage	13.8 V
Estimated stand by time	3 hours

Table 2.3.7 The battery specifications

2.4 Software Description

2.4.1 Embedded C

Embedded C is a set of language extension for the C programming language by the C standard committee to address community issues the exists between C extension for different embedded system.

2.4.2 Arduino Suit

It is an open-source software program that allows user to write and upload code with in a real work environment.

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INTRODUCTION

Chapter 1

INTRODUCTION

1.1 Introduction to Project

In India generally the traditional seed sowing methods includes the use of animal drawn funnel and pipes driller or drilling using tractor. Earlier method requires labor and a very time and energy consuming. Whereas in tractor-based drilling operators of such power units are exposed to high level of noise and vibration, which are detrimental to health and work performance. The emphasis in the development of autonomous Field Robots is currently on speed, energy efficiency, sensors for guidance, guidance accuracy and enabling technologies such as wireless communication and GPS In olden days technology was not developed that much. So, they were seeding by hand. But nowadays technology is developed. So now it's not necessary to do seeding in sunlight. By using robot technology, one can sit in a cool place and can-do seeding by monitoring the robot motion.

1.2 Description

The robotic systems play an immense role in all sections of societies, organization and industrial units. The basic idea in this study is to develop a mechanized devise that helps in on-farm operations like seeding/seed sowing at pre-designated distances and depths with all applicable sensors for controlling humidity, temperature.

This system has two main sections, monitoring station and control station, which are inter-communicated using/aided by the wireless Wi-Fi communication technologies. The control station as well as robotic station possesses the amenities which is seed dispenser, and seed storage, robotic system with motors, Arduino microcontroller, and power supply.

1.3 Methodology

Agriculture is a most important field in life of human being. It is a backbone of our country economy system. In this project work we have focused on seed sowing processes and tried to solve the problem. In seed sowing machine system, we have used battery powered wheels, dc motor inbuilt in these wheels and Arduino Uno is used for control the all-system process. When the seeds are empty it detects the level of storage seed and indicates with the help of LED. When any obstacle comes in-front of machine or divert path the seed sowing machine can detect the obstacle very easily with the help of IR sensor.

REQUIREMENTS AND SPECIFICATION

Chapter2

REQUIREMENT AND SPECIFICATION

2.1 Hardware requirement

- Microcontroller Arduino
- DC motor
- DC motor drivers
- Battery
- Power supply

2.2 Software requirement

- Embedded C
- Arduino suit

2.3 Hardware description

2.3.1 ARDUINO UNO

- Arduino is an open-source computer hardware and software that designs single-board microcontrollers
- microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical and digital world.
- The project's products are distributed as open-source hardware and software, which are licensed under the GNU Lesser General Public License (LGPL).

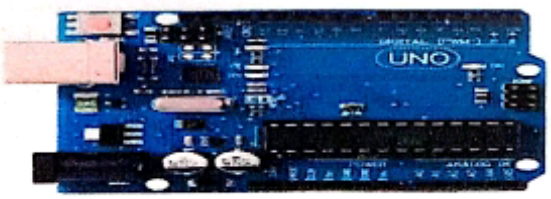

Fig 2.3.1 Arduino UNO

2.3.2 Pin description

Pin Category	Pin Name	Details
Power	Vin, 3.3V, 5V, GND	Vin: Input voltage to Arduino when using an external power source. 5V: Regulated power supply used to power microcontroller and other components on the board. 3.3V: 3.3V supply generated by on-board voltage regulator. Maximum current draw is 50mA.
Reset	Reset	Resets the microcontroller.
Analog Pins	A0 – A5	Used to provide analog input in the range of 0-5V
Input/output Pins	Digital Pins 0 - 13	Can be used as input or output pins.
Serial	0(Rx). 1(Tx)	Used to receive and transmit TTL serial data.
External Interrupts	2, 3	To trigger an interrupt.
PWM	3, 5, 6, 9, 11	Provides 8-bit PWM output.
SPI	10 (SS), 11 (MOSI), 12 (MISO) and 13 (SCK)	Used for SPI communication.
SPI	10 (SS), 11 (MOSI), 12 (MISO) and 13 (SCK)	Used for SPI communication.
Inbuilt LED	13	To turn on the inbuilt LED.
TWI	A4 (SDA), A5 (SCA)	Used for TWI communication.
AREF	AREF	To provide reference voltage for input voltage.

Table 2.3.2 The pin description Arduino Uno board.

2.3.3 Arduino uno Technical Specification

Microcontroller	ATmega328P – 8 bit AVR family microcontroller
Operating Voltage	5V
Recommended Input Voltage	7-12V
Input Voltage Limits	6-20V
Analog Input Pins	6 (A0 – A5)
Digital I/O Pins	14 (Out of which 6 provide PWM output)
DC Current on I/O Pins	40 Ma
DC Current on 3.3V Pin	50 mA
Flash Memory	32 KB (0.5 KB is used for Bootloader)
SRAM	2 KB
EEPROM	1 KB
Frequency (Clock Speed)	16 MHz

Table 2.3.3 Arduino Uno technical specification

2.3.4 DC Motor

A Dc motor is any of a class of rotary electrical motors the converts direct current electrical energy into mechanical energy.

The most common types relay on the forces produces by magnetic fields

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"A Comparative Study on Fake Job Post Prediction using Different Data Mining Techniques"

A Dissertation Submitted to Bangalore University in Partial Fulfillment for the Award of the Degree of 6th Semester

Bachelor of Computer Application

Submitted by

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Date: 10/09/2022

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INTRODUCTION

Chapter 1

INTRODUCTION

1.1 Overview of Project

In recent years, due to advancement in modern technology and social communication, advertising new job posts has become very common issue in the present world. So, fake job posting prediction task is going to be a great concern for all. Online job advertisements which are fake and mostly willing to steal personal and professional information of job seekers instead of giving right jobs to them is known as job scam. Technologies are around us to make our life easy and developed but not to create secure environment for professional life. If jobs posts can be filtered properly and false job posts are predicted, this will be a great advancement for recruiting new employees. Fake job posts create inconsistency for job seekers to find their preferable jobs which causes a huge waste of time. Like many other classification tasks, fake job posting prediction leaves a lot of challenges to face. This project proposed to Random Forest Classifier to predict a job post if it is real or fraudulent. We have experimented on Employment Scam Aegean Dataset (EMSCAD) containing 18000 samples which consists of several attributes such as Telecommuting, has_company_logo, has_questions, employment_type, required_experience, required_education and function. And these attributes will convert into categorical value from text value. The main goal to convert these attributes into categorical form is to classify fraudulent job adverstiments without doing any text processing and natural language processing. The trained classifier shows approximately 98% classification accuracy to predict a fraudulent job post.

1.2 Existing System

- Vidros et al. identified job scammers as fake online job advertiser. They found statistics about many real and renowned companies and enterprises who produced fake job advertisements or vacancy posts with ill-motive. They experimented on EMSCAD dataset using several classification algorithms like naive bayes classifier, random forest classifier, Zero R, One R etc. Random Forest Classifier showed the best performance on the dataset with 89.5% classification accuracy. They found logistic regression performing very poor on the dataset. One R classifier performed well when they balanced the dataset and experimented on that. They tried in their work to find out the problems in ORF model (Online Recruitment Fraud) and to solve those problems using various dominant classifiers.

- Alghamdi et al. proposed a model to detect fraud exposure in an online recruitment system. They experimented on EMSCAD dataset using machine learning algorithm. They worked on this dataset in three steps- data pre-processing, feature selection and fraud detection using classifier. In the preprocessing step, they removed noise and html tags from the data so that the general text pattern remained preserved. They applied feature selection technique to reduce the number of attributes effectively and efficiently.

1.2.1 Limitations of Existing System

- Online job advertisements which are fake and mostly willing to steal personal and professional information of job seekers instead of giving right jobs to them is known as job scam. Sometimes fraudulent people try to gather money illegally from job seekers. A recent survey by Action-Fraud from UK has shown that more than 67% people are at great risk who look for jobs through online advertisements but unaware of fake job posts or job scam.
- Existing system results have less accuracy.
- More time taking process.
- Complexity in implementing the system.
- Existing system considers more features, which leads for increase in time and cost.

1.3 Proposed System

- The target of this project is to detect whether a job post is fraudulent or not. Identifying these fake job advertisements will help the job seekers to concentrate on legitimate job posts only. In this, a dataset from Kaggle is employed that provides information regarding a job that may or may not be suspicious.
- This dataset contains 17,880 number of job posts. This dataset is used in the proposed methods for testing the overall performance of the approach. For better understanding of the target as a baseline, a multistep procedure is followed for obtaining a balanced dataset. Before fitting this data to any classifier, some pre-processing techniques are applied to this dataset.
- Random Forest Classifier is applied for classifying job post as fake. The performance measure metrics such as Accuracy, Recall, Precision, and Confusion matrix are used for evaluating the prediction for proposed classifier.

REQUIREMENTS
AND
SPECIFICATION

Chapter 2

REQUIREMENTS AND SPECIFICATION

2.1 Hardware Requirements

- System : Pentium i3 Processor
- Hard Disk : 500 GB
- Monitor : 15'' LED
- Input Devices : Keyboard, Mouse
- Ram : 4 GB

2.2 Software Requirements

- Operating system : Windows 10
- Coding Language : Python
- Web Framework : Flask

2.3 Scope of the project

This project aims to create a classifier that will have the capability to identify fake and real jobs. The main scope of this project is to identify the fake job advertisements and that will help the job seekers to concentrate on legitimate job posts only.

BUSINESS SKILL DEVELOPMENT COURSE REPORT

Submitted in Partial Fulfilment of the Requirements
for the Award of the Degree of
Bachelor of Business Administration

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Batch: 2020
2021-22

2020-2023

By

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Date :- 7 / 9 / 2022

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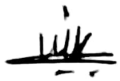

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STUDENT DECLARATION

I Vikram j (20R1C26009), hereby declare that the report is uniquely prepared by me and has never been presented before. I also confirm that the report is prepared only for our academic requirement, not for any other purpose.

Vikram j
(20R1C26009)

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A PROJECT REPORT ON

"A STUDY ON CUSTOMER SATISFACTIONAFTER SALES AND SERVICES AT SOLAR TVS "

A Project report Submitted to Bangalore University in Partial Fulfillment of the Requirement for the Award of a Degree In

"BACHELORS OF BUSINESS ADMINISTRATION"

BANGLORE UNIVERSITY

Submitted By

SANDEEP.S

(Reg. No. 19PZC26032)

Under the Guidance of

MANASA.V

Associate Professor in Commerce

Seshadripuram Academy of Business Studies

SESHADRIPURAM ACADEMY OF BUSINESS STUDIES

(Permanently Affiliated to Bangalore University)

NAAC Accredited 'B' Grade

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{2021 –2022}

BCom
Batch: 2019
2021-22

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GUIDE CERTIFICATE

This is to certify that the report titled "A STUDNY ON CUSTOMER SATISFICATION AFTER SALES AND SERVICES AT SOLAR TVS MOTORS", is prepared by SANDEEP.S, bearing Register No 19PZC26032 under my guidance in partial fulfilment of the requirements for the award of Degree in Bachelor of Business Administration from Bangalore University. The matter presented in this report has not formed a basis for the award of any degree/diploma by Bangalore University or any other University as per my knowledge.

Place: Bengaluru

Date: 07/09/2022

Manasa.V

MANASA.V

Assistant Professor

Dept. of Commerce and Management

Seshadripuram Academy of Business Studies

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COMPANY CERTIFICATE

This is to certify that Mr. SANDEEP.S, bearing Register No 19PZC26032 of SESHADRIPURAM Academy of Business Studies has completed Project in our organization for a period from 12/07/2022 to 22/07/2022. He has accomplished all the tasks assigned to him and has successfully completed. We wish him all the success in his future endeavours.

Date: 22/07/2022

Place: Bangalore

Signature of Signing Authority with seal

Naveen Kumar

SOLAR TVS NAGARBHAVI BENGALURU-39

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THIS IS TO CERTIFY THAT **Mr. SANDEEP S** BEARING REG. NO. **19PZC26032** IS A STUDENT OF VI SEMESTER BBA. HE HAS PREPARED A PROJECT REPORT ENTITLED **A STUDY ON CUSTOMER SATISFACTION AFTER SALES AND SERVICES AT SOLAR TVS.** AS A PARTIAL FULFILLMENT OF EXAMINATION OF VI SEMESTER BBA COURSE IN BANGALORE UNIVERSITY FOR THE ACADEMIC YEAR 2021-22.

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DECLARATION

I SANDEEP.S hereby declare that project titled, "A STUDY ON CUSTOMER SATISFICATION AT SOLAR TVS MOTORS" is an original work carried out by me, under the guidance of Mrs. MANASA.V, Assistant Professor, Seshadri Puram Academy of Business Studies is submitted to Bangalore University in partial fulfilment of requirement for the award of Degree in **Bachelor of Business Administration**. I also declare that this project has not been submitted for the award of any degree/diploma of Bangalore University or any other University.

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Date: 07/09/2022

Sandeep S
(Signature)

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Reg. No. 19PZC26032

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ACKNOWLEDGEMENT

It is my privilege to acknowledge the assistance and contribution of large number of individuals to this effect. I am highly indebted to each one of them for their constructive criticisms and support.

This study would not have been possible without the time, input and co-operation of many individuals to whom I am eternally grateful.

I convey my sincere thanks to Prof. Jayarama, Principal, Seshadripuram Academy of Business Studies, for his constant guidance and support throughout the study.

I extend my special thanks to Manjunatha G, BBA Coordinator, for his support in completing the project.

I would like to thank Sowmya D.N, Associate Professor, HOD, Dept. of Commerce and Management, for her encouragement in completion of the project.

I am indebted to MANASA.V, Assistant Professor, I convey my heart felt wishes to my project guide who has always been a source of inspiration to me throughout the study.

I would like to take this opportunity to thank my parents for their constant support and I would like to acknowledge almighty for showering his blessings on me.

I would like to thank everyone who has been of any assistance to me in conducting this study.

Date: 07/09/2022

Place: Bengaluru

Sandeep S

. SANDEEP.S

(19PZC26032)

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A Project Report on

"A STUDY ON EMPLOYEE SATISFACTION AT BHARAT HEAVY ELECTRICALS LTD. (EDN)

Project submitted in partial fulfilment of the requirements for the Award of the Degree of

BACHELOR OF BUSINESS ADMINISTRATION

BANGALORE UNIVERSITY

Submitted By

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DECLARATION

I POOJITHA PRADHANI hereby declare that project titled "A STUDY ON EMPLOYEMEE SATISFACTION AT BHARAT HEAVY ELECTRICALS LTD (EDN)". is an original work carried out by me, under the guidance of LAKSHMI.S, Associate Professor, Seshadripuram Academy of Business Studies is submitted to Bangalore University in partial fulfilment of requirement for the award of Degree in Bachelor of Business Administration. I also declare that this project has not been submitted for the award of any degree/diploma of Bangalore University or any other University.

Place: Bengaluru
Date: 07/09/2022

POOJITHA PRADHANI
Reg. No. 19PZC26029

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ACKNOWLEDGEMENT

It is my privilege to acknowledge the assistance and contribution of large number of individuals to this effect. I am highly indebted to each one of them for their constructive criticisms and support.

This study would not have been possible without the time, input and co-operation of many individuals to whom I am eternally grateful.

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I am indebted to LAKSHMI.S Associate Professor, I convey my heart felt wishes to my project guide who has always been a source of inspiration to me throughout the study.

I would like to take this opportunity to thank my parents for their constant support and I would like to acknowledge almighty for showering his blessings on me.

I would like to thank everyone who has been of any assistance to me in conducting this study.

POOJITHA PRADHANI
(19PZC26029)

Place: Bangalore

DATE: 07/09/2022

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GUIDE CERTIFICATE

; is to certify that the report titled "A STUDY ON EMPLOYEMEE SATISFACTION AT ıRAT HEAVY ELECTRICALS LTD (EDN), POOJITHA PRADHANI bearing ister No 19PZC26029under my guidance in partial fulfilment of the requirements for the rd of Degree in **Bachelor of Business Administration** from Bangalore University. The ter presented in this report has not formed a basis for the award of any degree/diploma by galore University or any other University as per my knowledge.

Place: Bengaluru
Date: 07/09/2022

LAKSHMI.S
Assistant Professor
Dept. of Commerce and Management

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An ISO 9001, ISO 14001, OHSAS 18001 and ISMS Certified Unit

Certificate

This is to certify that

Mrs. POOJITHA PRADHANI

A Student of BBA

[HR]

SESHADRIPURAM ACADEMY OF BUSINESS STUDIES BANGALORE.

was provided with facilities to do project work at

BHEL, ELECTRONICS DIVISION, BANGALORE

as per following details:

Duration of Project Work

FROM	TO
24-7-2022	**25-8-2022**

PROJECT TITLED

EMPLOYEE SATISFACTION

Under the Guidance of

Mr. KALYANA SUNDARAM G

Sr. ADMINISTRATIVE OFFICER

This permission to do the Project Work was accorded as per request from the institution where the student is studying for partial fulfillment of the completion of the course. The student, who enviced keen interest in the training, has completed the Project Work. The conduct of the student was **Very Good** during the above period.

Place: Bangalore
Date: 25/8/2022

Signature of Issuing Authority
with Seal
Kalyana Sundaram G.
Sr Administrative Officer (HRD)

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