Mini Project Proposal (III Semester MCA)

Approval of the mini project proposal is mandatory to continue and submit the project work.

The mini project proposal should clearly state the project objectives and the environment of the proposed project to be undertaken.

The following documents are to be submitted for approval

1. Pro forma for approval of the mini project (Present in this document)
2. Synopsis/Abstract with following contents
    i. Title of the Mini Project.
    ii. Introduction and Objectives of the Project.
    iii. Tools / Platform, Hardware and Software Requirement
    iv. Problem Definition and Initial Requirements
    v. Basic functionalities of the project

The abstract should be submitted in the format given in the 3rd page of this document.

The Abstract in the given format shall be uploaded on or before **01.12.21**

MES COLLEGE OF ENGINEERING, KUTTIPPURAM
DEPARTMENT OF COMPUTER APPLICATIONS
20MCA245 – MINI PROJECT

PRO FORMA FOR THE APPROVAL OF THE THIRD SEMESTER MINI PROJECT

(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete Pro forma of approval in any respect will be rejected.)

Mini Project proposal No: 1 (Filled by the Department)	Academic Year:2020-2021 Year of Admission:2020

1. Title of the Project : MACHINE LEARNING BASED DIABETES PREDICTION USING DECISION TREE

2.Name of the Guide: Mr. Syed Feroze Ahamed M

3.Number of the Student: 1

4.Student Details (in BLOCK LETTERS)

Name GAYATHRI K Roll Number 19 Signature 

Date:1/12/2021

Approval Status : Approved / Not Approved

Signature of Committee Members

Comments of The Mini Project Guide Dated Signature

Initial Submission :

First Review :

Second Review :

Comments of The Project Coordinator Dated Signature

Initial Submission:

First Review

Second Review

Final Comments :

Dated Signature of HOD:

INTELLIGENT CHATBOT FOR PREDICTION AND MANAGEMENT OF STRESS

GAYATHRI K

INTRODUCTION AND OBJECTIVES OF PROJECT

Stress Management and Prediction application is an end user support and consultation project. Here, a standalone application which we can further embed with websites or phone application. The application is fed with various details and the stress associated with those details. The application allows user to share their stress related issues. Here, we use neural network and machine learning technique like decision tree to train the data and guess the most accurate stress level that could be associated with patient's details and according to that it will show the measures to take place. This application can be used to identifying the stress level and its management.

This Project "Intelligent Chatbot for Prediction and Management of Stress" will be an application that can be integrated in website, it will give user the ability to identify the stress based on the given questions and answers. We have chosen this project because we want to provide user more easy, user-friendly, interactive way to find out about their stress. Bot will ask them few questions and according to the chosen answers, bot will show them the result and management of stress . Chatbot is a program that is designed to stimulate conversations or talk with human users. In this User communicates with the bot either with text or voice. Chatbot give logical reply or the already stored answers to the user for the questions. It is just like a user is talking to the other person. They interpret the questions and provide answer to them. They are used in messaging apps, e- commerce, etc. They can be customized for either single company based or public based. Stress is a physiological kickback to the social, behavioral or other physical issues that people face in their real-life activities, including in their environments like workplace, household, etc. Continued stress consumption can lead to some serious and extreme health issues, such as causing physical illness through its physiological consequences, changes in behavior, and problems with social isolation. Stress affects tons of individuals in their life like mood, behavior, health and quality of life. Disorders include: Headaches, heart attacks, depression, and system abnormalities include illnesses. They further note that, relative to the opposite forms of stress, acute stress appears to attract less consideration from researchers. Acute stress is also caused by multiple kinds of immediate emotional and physical challenges that people can encounter in several ways during ongoing everyday circumstances. This triggers certain physical changes, such as an increase in the heart, and these changes can induce severe long- term diseases and have a negative effect on the emotional and physical well-being of a person.

HARDWARE AND SOFTWARE REQUIREMENT

This specifies the hardware and the support software required to carry out the development.

- **Hardware Requirements**

The selection of hardware is very important in the existence and proper working of any software. Then selection

hardware, the size and capacity requirements are also important.

- Processor : 64 bit
- RAM : Min 3 GB
- Hard Disk : 10 GB

➢ Software Requirements

One of the most difficult task is selecting software for the system, once the system requirements is found out then we have to determine whether a particular software package fits for those system requirements. The application requirement:

- OPERATING SYSTEM: WINDOWS 10
- FRONT END: HTML, CSS, JAVASCRIPT
- BACK END: Mysql
- IDE: Jetbrains Pycharm, Android studio
- TECHNOLOGY USED: PYTHON,JAVA
- FRAME WORK USED: Flask

PROBLEM DEFNITION AND INITIAL REQUIREMENTS

➢ Existing System:

From several studies it is found that employees working in IT professionals in industry are facing issues related to stress disorders. This is because of change in their work culture and their changing lifestyles. Many businesses and companies provide their workers with mental health programs to relieve their tension and the working environment. But these issues are too huge to handle and far from control. Machine Learning techniques are used to study the working in adults and to slim down the issues that powerfully determine the stress levels. The existing system is prediction of mood done by using data collected by using wearable sensor devices, smartphones and some clinical applications. But this system has some disadvantages. That are given by

- Lack of accuracy
- Lack of reliable performance

So there is no such existing system that can be compared to the proposed system.

- **Proposed System:**

Stress becomes a major issue in today's time and also lead to many health problems of People of different professions, lifestyles, gender and age groups. Our work is to make a chatbot that will talk to user. It will ask questions from the user and give him choices for the question or he can write them. According to the chosen answers it will predict the type of stress he/ she is facing and respective of that it will show management of the stress. This system will be an application that can be integrated in website, it will give user the ability to identify the stress based on the given questions and answers. We have chosen this project because we want to provide user more easy, user-friendly, interactive way to find out about their stress. Bot will ask them few questions and according to the chosen answers, bot will show them the result and management of stress. Otherwise we can describe as user talk to the bot and first bot get his details and asks him to give the test for the prediction. When the stress is predicted, according to that it gives management for that. We have applied machine learning techniques for the prediction of stress.

BASIC FUNCTIONALITIES OF PROJECT

This part of INTELLIGENT CHATBOT FOR PREDICTION AND MANAGEMENT OF STRESS shall provide the following type's easy-to-use, interactive, and intuitive interfaces.

- This app shall provide with login to access their specified account using a username and unique password
- During login process the app will verify the specific user account
- App contains three sections Admin, user, psychiatrist
- The system shall be developed as an android application
- Administrator should contain the following functional requirements.
  - It should capture the following data
    - Username
    - Password

- **User Modules**

There are three types of modules. Administrator, User and Psychiatrist. Each of them have distinct login section each of them can login their account section by conforming their unique username and password.

1. Administrator

Admin can login the system using username and password. Admin can control the overall system and should have the functionality to monitor overall process.

Admin can control the overall workflow.

- Login
- View registered users
- View feedback
- View complaint and reply

2. **User**

User can login the app using his/her unique username and password and they can do the functionalities that are given below

- Register
- Login
- Add complaint and view reply
- Chatbot
- Add feedback

➢ **Functional Modules**

CHATBOT

A chatbot is a computer program that uses artificial intelligence (AI) and natural language processing (NLP). It is designed to stimulate conversations or talk with human users. In this User communicates with the bot either with text or voice. Chatbot give logical reply or the already stored answers to the user for the questions. It is just like a user is talking to the other person. They interpret the questions and provide answer to them. They are used in messaging apps, e- commerce, etc. They can be customized for either single company based or public based. Stress is a physiological kickback to the social, behavioral or other physical issues that people face in their real-life activities, including in their environments like workplace, household, etc.

MACHINE LEARNING

Machine Learning, as the name says, is all about machines learning automatically without being explicitly programmed or learning without any direct human intervention. This machine learning process starts with feeding them good quality data and then training the machines by building various machine learning models using the data and different algorithms. The choice of algorithms depends on what type of data we have and what kind of task we are trying to automate.