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# Depression Analysis using Sentiment Analysis in Django framework

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**ABSTRACT**: This application helps in detecting depressed users in social network services. It uses data mining techniques in psychology area and applies it to the user's social media posts, messages, articles.This application helps in preliminary analysis for potential depressed social media users.It is highly useful since most of the depressed users do not consult professional psychologists due to the social stigma surrounding depression. It helps potential depressed users to make well informed decision to get them treated by consulting clinical psychologists. It can also serve as preliminary test tool for psychologists to categorise users as depressed or not. This concept includes sentimental analysis method to find out the type emotion for each comment which has been posted by the person on social media. We have used Decision Tree Algorithm for the classification of data. The purpose of using this algorithm is the accuracy and precision of results it provides for making prediction. Our application helps a person to conduct the initial test for themselves.

**KEYWORDS:** Depression Analysis, Machine Learning Model, Sentimental Analysis, Decision Tree Algorithm.

## I.INTRODUCTION

Datasets originating from social networks are valuable to many fields such as sociology and psychology. But the supports from technical perspective are far from enough, and specific approaches are urgently in need. This work applies data mining to psychology area for detecting depressed users in social network services[1]. Sentiment analysis method is proposed utilizing vocabulary and man-made rules to calculate the depression inclination of each comment/message.

Depression is a leading cause of disability worldwide. In clinical diagnosis, psychological doctors often make face-to-face interviews referring to the commonly used Diagnostic and Statistical Manual of Mental Disorders criteria, where nine classes of depression symptoms are defined. Effective but not proactive. More than 70% of people in the early stages of depression would not consult the psychological doctors [2,3].

## II.EXISTING SYSTEM

For checking the depression level of the patients, there is no such tool in mental health check industry. The person who is going to consult the doctor will be having the session called initial screening in the initial screening step patient will be having few questions regarding why he/ she feels the depression and how to overcome with this based on experience of the doctor in this filed[4]. Then doctor will come to know the depression level of the patient based on the answers and he behaves and how he gives the answers for particular situation.

Based on the report of the patient doctor will decide for the next test for diagnosing the depression of the patient. This manual process takes lot of time for following the same procedure in the initial stage.

## III.PROPOSED SYSTEM

The main goal is to assist the person who is having the depression level to check their own mental health conditions and to help psychological doctors to study about the diagnosing the patients depression. This model built by using twitter data posted user the users. The data is pre-processed and then that data is applied to sentiment analysis technique. To classify the data decision tree machine learning algorithm is used.

Below are the contributions of the depression analysis application.

1. It helps for patients for initial screening of the test.
2. Helps to predict the depression level for patients with high accuracy

3. This application saves the time instead of consulting doctor in initial stage
4. If patients use this application then psychologists will get time to diagnose the depression and concentrate next stages for that.

## IV.FEASIBILITY STUDY

When developing an application, the feasibility study is the initial step.This is done because the developer should know the requirement and whether it is profit or lose by considering particular resources or tools [5].About the financial rate and excellence of the work, this study helps for making certain decisions for the application which we are going to develop.

The feasibility study tells all of the information collecting the tools and technologies for developing the application and also gives the time period of developing application.

**TECHNICAL FEASIBILITY**: When developing an application, the initial stageis important for collecting the required tools and suitable technologies Once the required tools and resource are collected for the specific application the developer should know the technologies which is going to use in the application in depth and also aware of the tools how they work and how they implemented.

**OPERATIONAL FEASIBILITY:** The application which is going to develop should match with the requirements of the client once it is developed. The application should be companionable with all browsers and different resolution size of the device. When the application model is ready the model should meet the requirements which are given by the clients. This feasibility study is based on tools which are selected for developing the application how they used and the working of the tools.

**ECONOMIC FEASIBILITY**: This study tells about the economic rate of the resources which are selected to build the model. Here feasibility study affects the application when it comes to the quality of the model. So this helps in selecting the suitable resources to build the application. Tools which are not required for the application are not to purchase because this increases the burden for the client. So whatever tools and resources are selected that should be used while building the model

## V. IMPLEMENTATION

This section delivers the model's features and functionalities. The model is validated for working of the application when the UI is implemented using machine learning. The phase provides the planning of the model that how it represents and works with new test cases using algorithms.

## VI. RESULTS

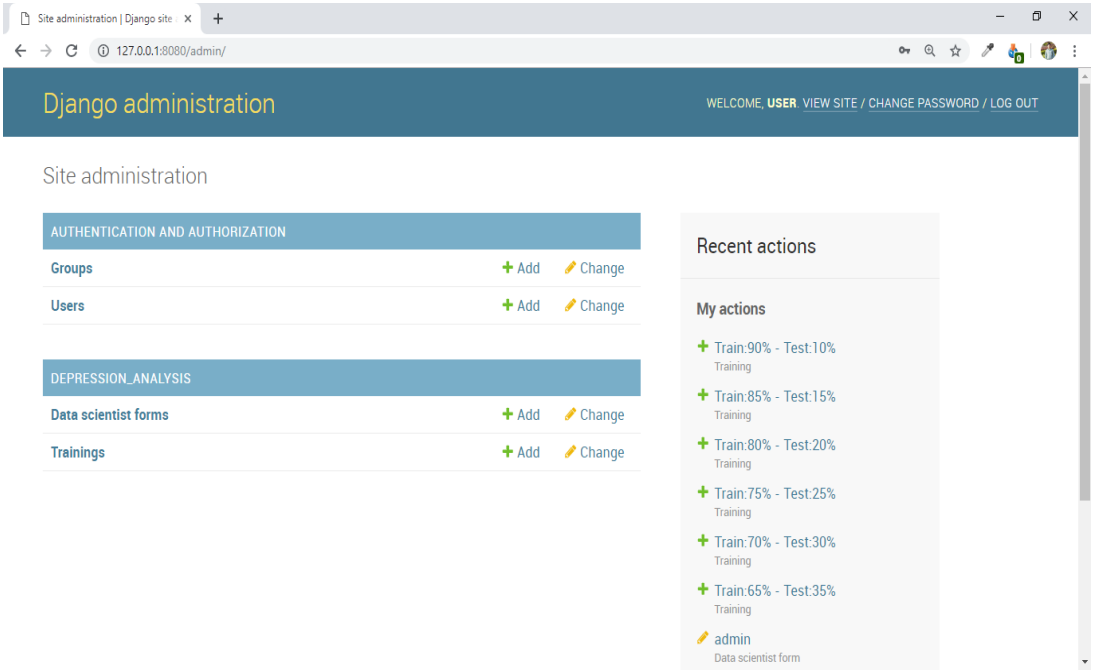


**Fig 1: Admin home page**

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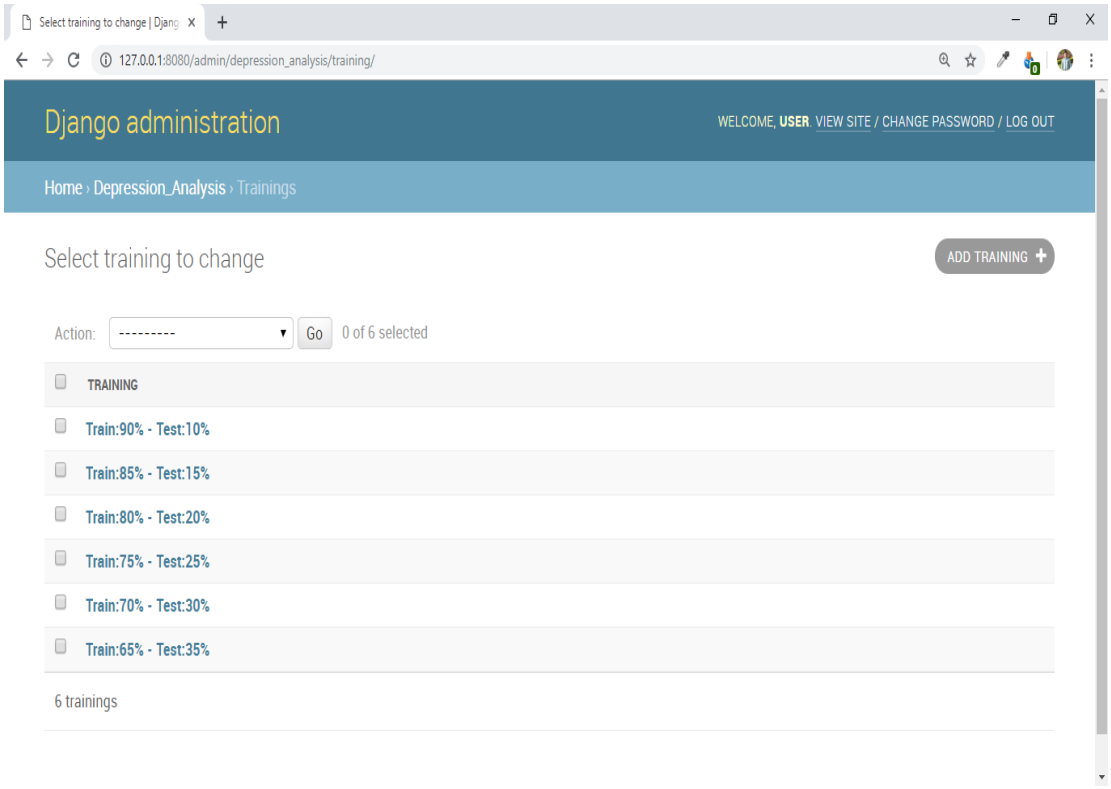


**Fig 2: Training and testing**

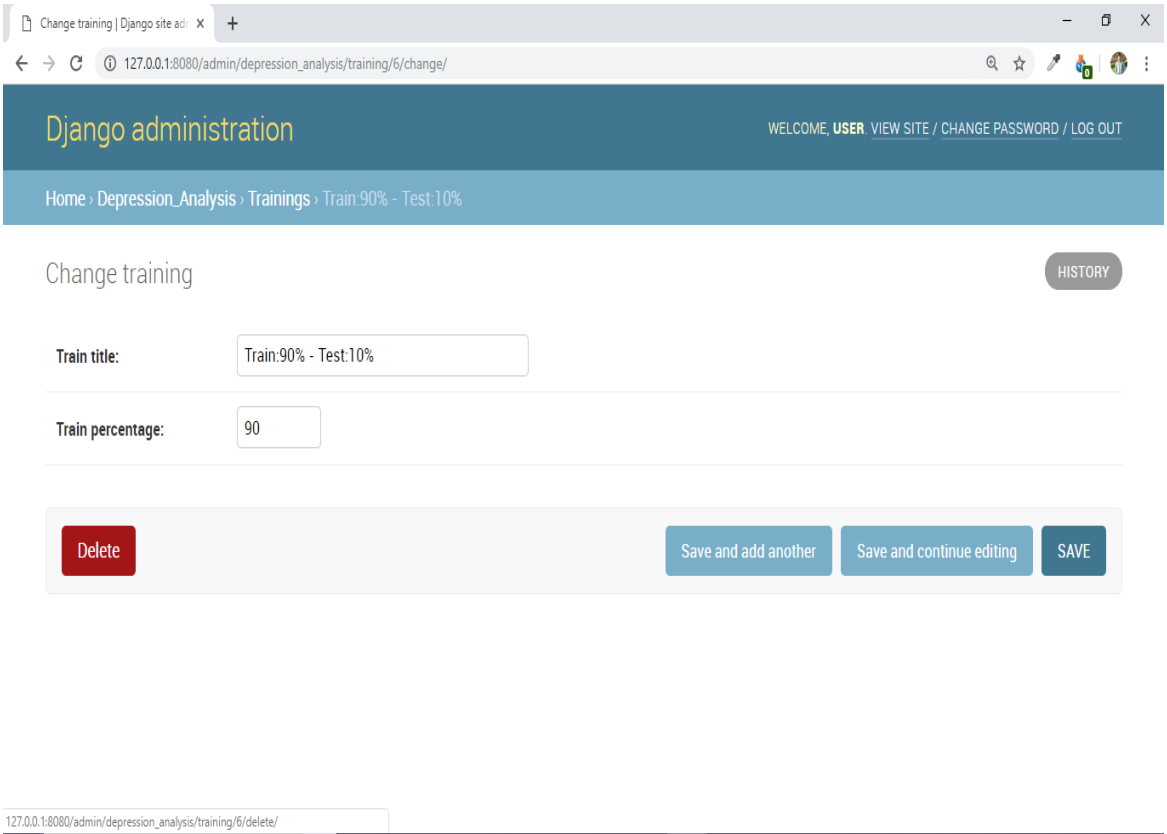


**Fig 3:Deleting the Record**

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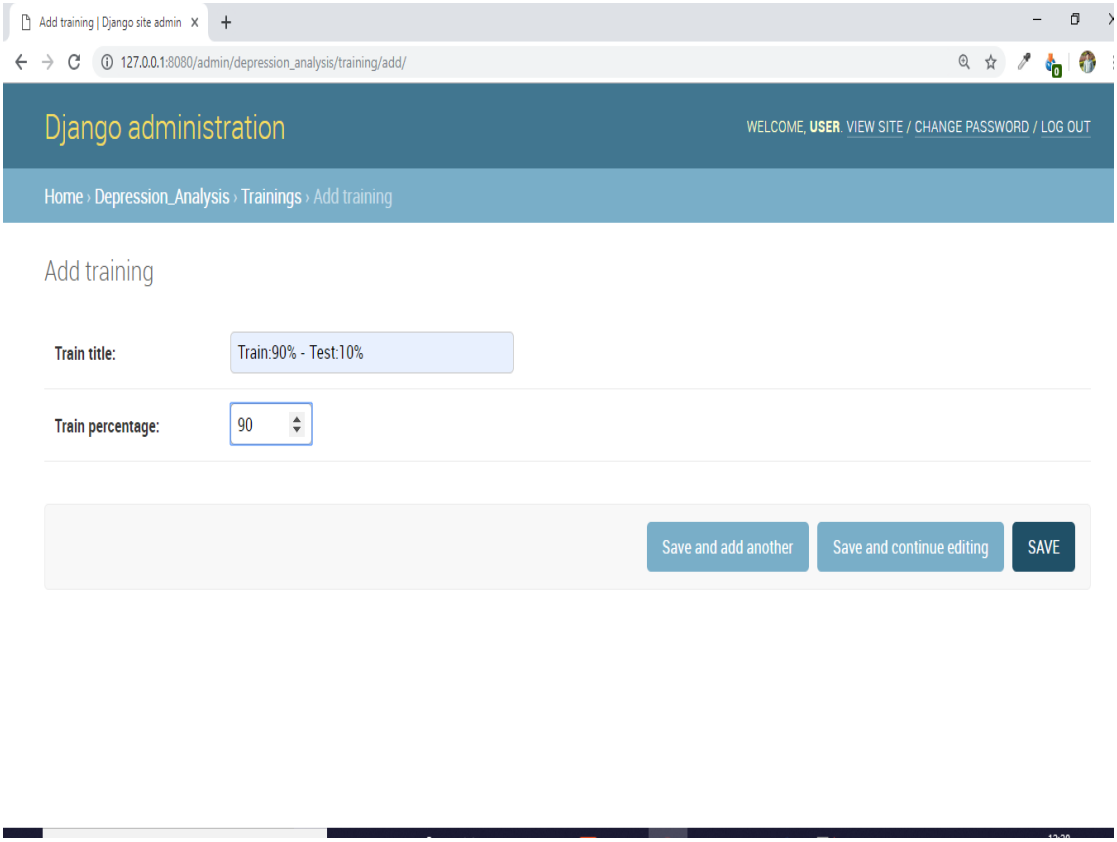


**Fig 4: Record Insertion**

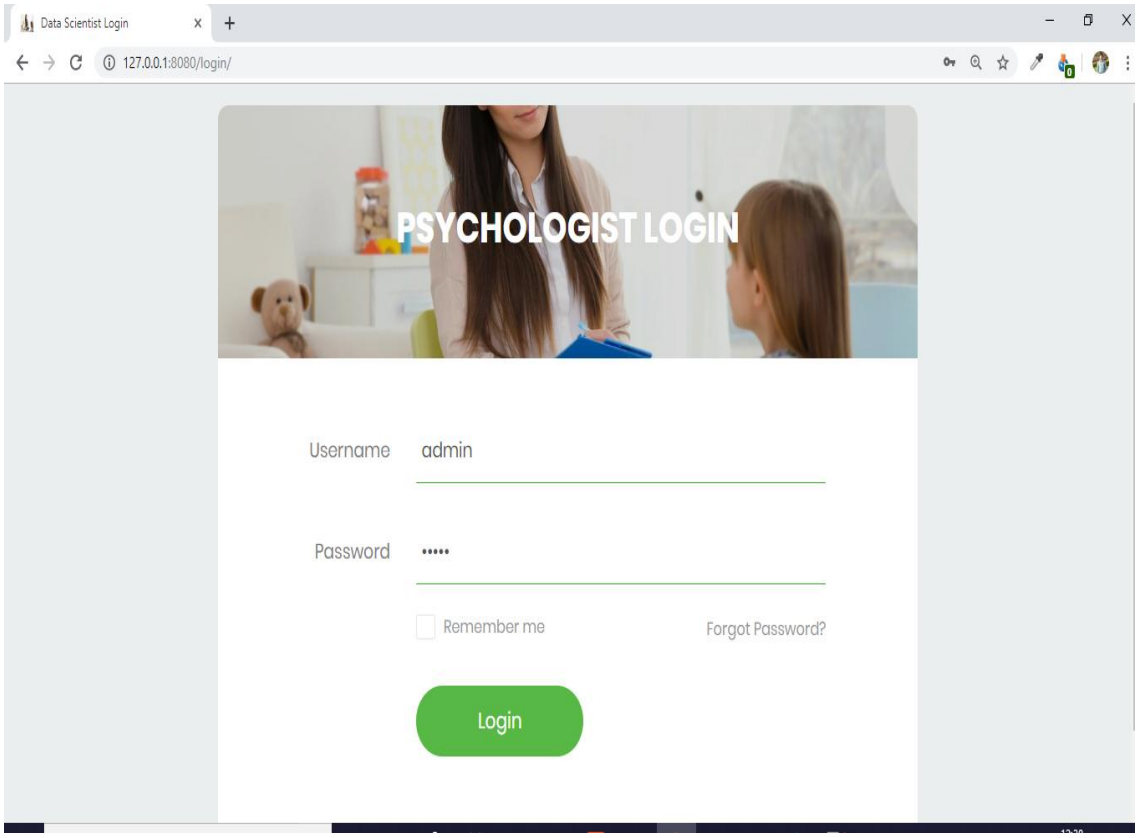


**Fig 5: Psychologist login**

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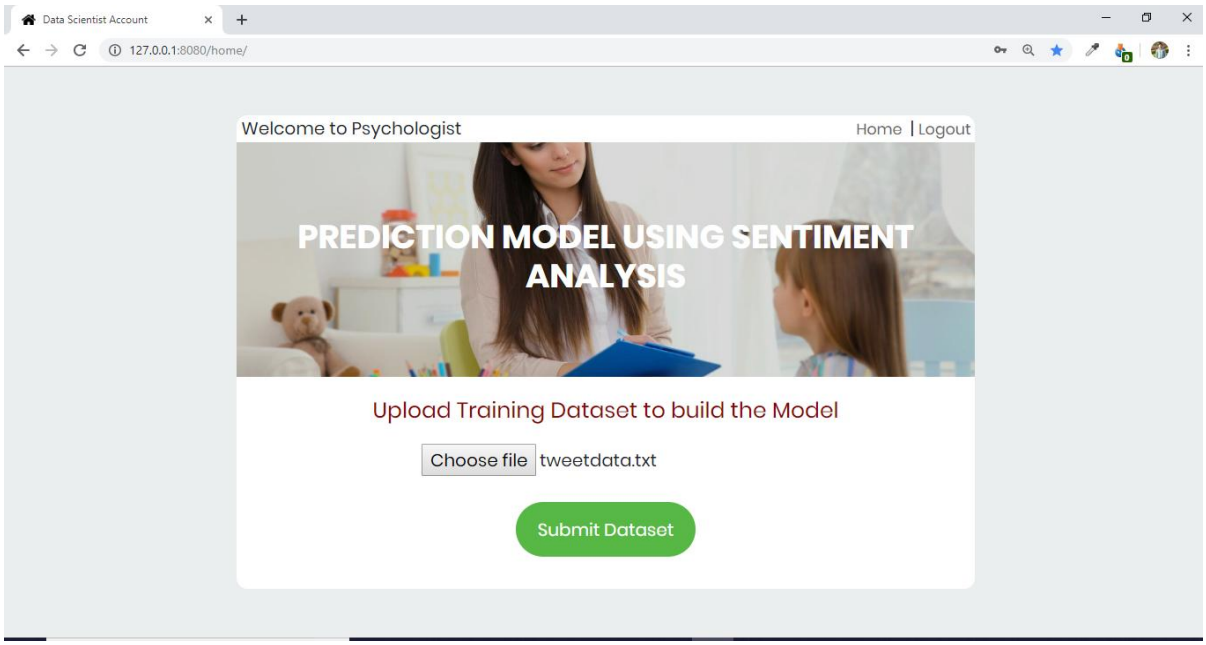


**Fig 6: upload dataset**

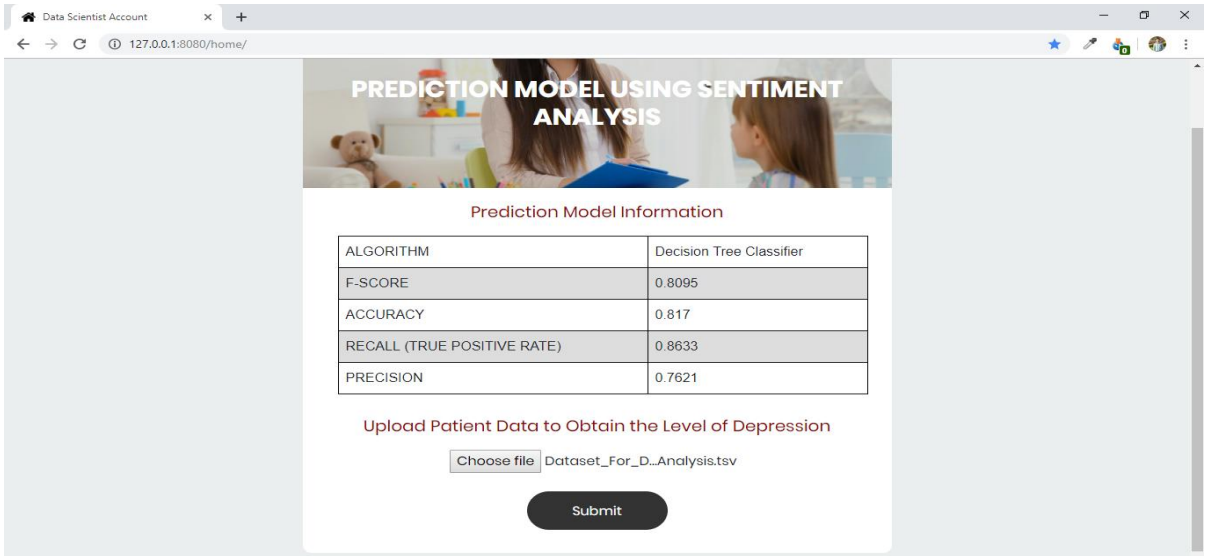


**Fig 7: Patient message dataset**

## VII.CONCLUSIONS

- By using this application Psychologists can use it for initial screening.
- Psychologists can easily analyse the depression level.
- By using this application Users can analyse their depression level by themselvesusing data available in Facebook, What's app Tweeter etc.

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