

Development of Mobile Application to monitor Mental Wellbeing

Anandhi G.R¹, Anukriti Rai², Shiva Priya³ Sucila Shalomy

B.Tech, Information Technology, Panimalar Engineering College, Chennai-600123

Prof.Mary Rexcy Asha

Associate Professor in the Department of Information Technology, Panimalar Engineering College, Chennai

Abstract - The Emotional Wellbeing of an individual is very important. In today's fast pacing world, we find that many people go through depression and anxiety issues. There is no specific age for depression or anxiety to occur. Depression and anxiety are the most common mental health problems that an individual must face. A recent study has showed that over 90% of the world's population has to deal with anxiety and depression issues. Our paper focuses on developing a mobile application for the users that is designed to monitor the emotional changes in real time. The designed application, obtains data via self-report psychological questionnaires, keeps a record of them, tracks and monitors them. It sends the maintained user reports to the user's family, friends and doctors whenever it observes that the user's mental health is declining. The application also includes various other tools like AI powered Chat bots and many other features that help the user to calm down whenever the user becomes anxious or depressed

Key Words: Anxiety, Depression, Mental Wellbeing, Chatbots.

1. INTRODUCTION

The Mental wellbeing of an individual is very important. Mental well-being refers to how well the person is mentally stable. The Mental Stability of a person can vary due to multiple reasons. In today's world, where we find people being so caught up in their day to day activities so much that they don't have time to relax and take a break. This then becomes the root cause for the major mental health problems like anxiety, depression, Stress, Pressure etc. Given a Stressful situation, it is perfectly normal for any person to get stressed out or Tensed. However, if this stress or pressure continues to last longer than usual, it then becomes a matter of concern. This over-lasting Stress and tension is what we call in the medical terms Anxiety and depression. The American Psychological Association (APA) defines anxiety as "an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure". Depression however, is an illness that involves the body, mood, and thoughts and that affects the way a person eats, sleeps, feels about him or herself, and thinks about things. There

are many stages of Anxiety and Depression. The stage of Anxiety and Depression of an individual depends on how they have been affected by it. It is very important for people suffering from Anxiety and Depression to identify their illness and come out of it.

2. MODULES

2.1 Chatbot

A Chabot is computer or an artificial intelligence which conducts a conversation via auditory or textual methods. It also has predefined moods set up such as sad, happy, anxious, depressed, overwhelmed, and perfectly normal.

2.2 Calming Exercise

It contains a list of psychologically proven exercises that help calm the mind and body. It also contains short demo videos with audio explanation. It contains links to other exercises in the suggestion tab.

2.3 Positive Quotes

It contains a list of positive quotes to help the user feel better and it also sends the notification to user. It contains links to other positive quotes in the suggestion. It is specifically designed to help the user feel better when low.

2.4 User Account

It contains user account details such as user details such as username, password, and user email id etc. user can edit the details as per his/her needs.

2.5 Test Feature

It Contains Psychological Questionnaires and weekly test assessments such as 20 questions. The answer will be analyzed and reports will be sent to the user's friends and

family and also helps them by giving the good psychiatrists with good reviews in range and display.

2.6 User Moods

It contains Predefined Moods Set Up as follows

- I. Sad
- II. Happy
- III. Anxious
- IV. Depressed
- V. Overwhelmed
- VI. Perfectly Normal

This is specifically designed for the purpose of user interaction with the application when user is in one of the above moods.

2.7 Database

It is used to Store all user Details and Test Reports. Updates are done whenever necessary. Any changes made at any point of time are stored in the database. The SQLite database is used for this application.

3. ARCHITECTURE DIAGRAM

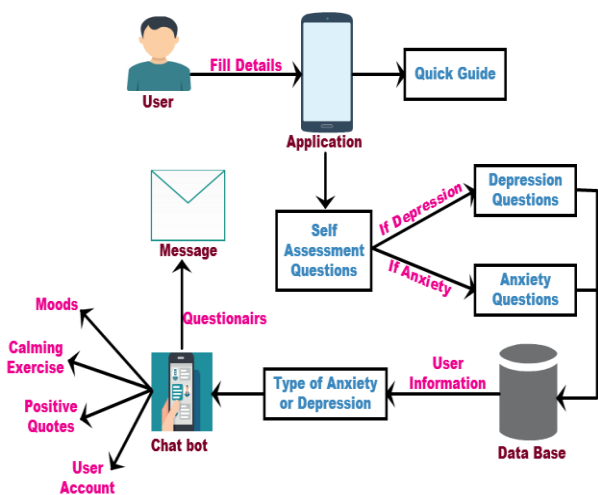


Fig -1: Diagram for mental wellbeing application

4. BENEFITS OF THE APPLICATION

The developed application focuses on individual's suffering from mental illness. The application has been developed with the following benefits

- i. User can calm down by following the list of exercises given
- ii. Helps user track the level of Anxiety and Depression
- iii. Finds Physiologist in good range
- iv. Overall helps the user to calm down when stressed out.
- v. The application itself as a whole serves as a good companion to the user when low.

5. CONCLUSIONS

As we know, the mental well being of an individual is very important. Without a proper mental balance, a person's life can be widely affected. To overcome such issues, the developed application provides many features such as calming exercise, positive quotes, user mood and test feature that help an individual suffering from such issues of anxiety and depression to come out of it. It is also found that the application was successful amongst multiple users.

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