

A Brief Study On Mental Health Tracker

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ABSTRACT— The Companion App project sets out to address mental health concerns that are currently growing in the increased rate of remote work and isolation. This Flutter-based mobile application helps users monitor and enhance their mental well-being through customized action items and progress statistics. After answering a series of questions, which suggest probable action for managing their mental state, the app will be displaying progress on a dashboard for easy tracking. For data storage, it uses a Firebase cloud-native NoSQL database that is extremely performant, scalable, and also synchronized. It also foresees in the future the integration of machine learning models to bolster the app's potential and provide advanced support for mental health. This project combines app development, cloud services, and machine learning to develop an easy-to-use and highly effective platform for mental health management.

Keywords: Mental Health Tracker, Companion App, machine learning, natural language processing, feature extraction, social media, interdisciplinary research.

1. Introduction.

Mental health is an essential element in holistic welfare. Nevertheless, mental health is continuously neglected until it breaks through a great deadlock. Several living beings, together with the widespread use of long-distance working, social isolation, and high-speed life, are experiencing mental health problems in the present age. Companion App will respond to the increasing need to provide easy access to a tracker application for psychiatric health, which is simple to use and intends to proactively assist people to monitor and organize their psychiatric condition. Its nay is not used in academic writing as an extremity for a smartphone; it is a companion for health and well-being that guides users through an individualized self-assessment to examine their emotional condition and detect earlier signs of stress, anxiety, or depression.

The user explanation is easy to understand so far and has formed concerns that help them understand their mental states better. The app sends personalized suggestions for other tasks, including mindfulness exercises, relaxation techniques, or motivational reminders based on their responses. These suggestions aim, in addition to promoting positive mood changes, structural resilience, and health behavior. The Companion App's additional feature is the tracking of the client's development during the past era. They keep a complete record of their mental health condition, which they then represent on a synergistically colored screen. The current enables users to detect emotional transitions, form, and measure their improvement, providing them with valuable health realizations.

Currently, the app can assist with a personalized mental vitality track. In the future, the company would like to introduce several new machine learning algorithms in the app to enhance the consumer's expertise. The app, together with advanced information inferential, can provide a more precise recommendation based on their nature of behavior, which will try to reach a higher level together with a smart mental fitness solution.

The Companion App isn't just a tracking device; it's an expandable mental health device aiming at empowering people with insight and advancing their feelings in a user-friendly, efficient, and helpful manner. Personal advice and finely calibrated data-driven perspectives unite to move the app closer so that a trusted companion can be used to enhance a person's happiness, opening the door to a world of accessible and manageable psychiatric care. [1].

2. Problem Statement

The rising trends of reworked expectations in today's fast pace are causing mental health challenges: stress, anxiety, and depression. This is exacerbated by remote work and social distancing. However, a huge number of individuals appear to have difficulty in noticing the early symptoms of mental distress and do not prompt help until symptoms have escalated. There are hardly any accessible tools for common people to perform regular mental health check-ups, track their progress, and make timely interventions or seek professional guidance.[2]

Thus, there is an urgent need for an easy, engaging, effective approach that allows the individual to monitor his or her mental well-being while being able to get personal recommendations and insights on emotional states in a non-judgmental and supportive manner. The application would reward people that reflect on themselves and support positive mental health practices while

providing help as soon as their user displays early signs of mental disturbances. This could also help to remove the administrative stigma around mental health care and allow individuals to achieve a healthier and well-configured life.[4]

The **Companion App** is introduced with the understanding of how one might battle these enemies for real. The whole essence is simple; it will address them by being a mental tracker such that individuals can rate their mental state and sort down tasks personalized according to their needs one by one and be entertained on each task.

3. Literature Review

Today, mental health issues like anxiety, depression, and stress are rampant, following remote work and social isolation. By the World Health Organization (2021) estimates, one in four individuals will face mental health disorders at some point in their existence. However, many apps do not encourage person-centred interventions or lose their capacity to engage a user constructively over time and hence validate the demand for alternative solutions that are more personalized.[3]

The secure and scalable platform on Firebase makes this idea suitable for working on sensitive mental health data while maintaining the aspect of confidentiality and data protection (Google,2021). Research has suggested that gamification elements that call on reward, competition, and achievement are effective in enhancing user retention and motivation (Przybylski & Weinstein, 2017). Personalization through tasks, challenges, and tracking progress encourages sustained usage of mental health apps, instilling potentially positive habits in users. The advent of digital mental health solutions, such as machine learning-based approaches, cloud technologies, and gamification, may lead to the proper management of mental health problems by different individuals. The Companion App incorporates this advancement, delivering an accessible, effective, and personalized solution to the global mental health problems that require urgent attention.[6]

4.Exploring Data

The information for the Companion App project includes gathering and analyzing a number of statistics that are starting to better understand the state of health, consumer demands, and the effectiveness of existing treatments.

1. User Demographics and Needs

Surveys: Collect demographic data and assess users' mental health practices and app preferences.

2. Market and Competitor Analysis

Competitor analysis of existing psychiatric fitness applications to find weaknesses in features and customer experiences. A review of current trends in the use and functionality of psychiatric wellness applications by users.

3. Testing and Feedback

A pilot test to produce a beta version of the application for a small number of consumers to test its usability. A/B Testing: Test various features with users to determine the most effective options.[7]

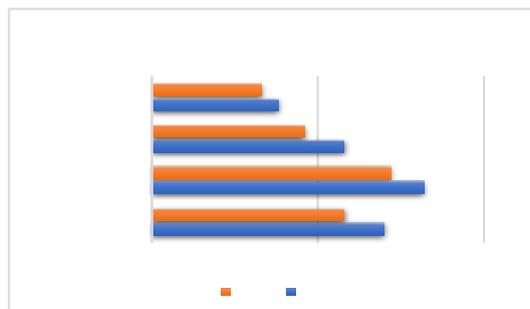


Figure 4.1: Impact of mental health.

5.Statistics

The current section compares data from the 'Mental Health Tracker'app for depression, anxiety, and sleep irregularities for 2020 and 2021. The COVID-19 pandemic has affected a number of citizens' mental vitality, and we would like to see how these difficulties have changed beyond the era. [11].

In 2020, 58 % of users reported feeling centrist in order to experience severe depression. This appropriation is likely to contribute to stress and isolation due to the complication of terrorism. The rate of users reporting depression is expected to reach around 70% by 2021. The current demonstrations, which some individuals have survived in order to maintain their mental vitality in the face of the upcoming pandemic.

About 72% of users will show signs of anxiety in 2020. Concerns about health and work were attached to this. This amount was increased to about 82% by 2021. The current method, which maintains anxiety tiers as uncertainty persists, is to maintain the status quo.

In 2020, about 33% of users had trouble sleeping, often due to stress and anxiety. This suggests that continued support is essential to help people manage their psychiatric health during difficult periods. [9].

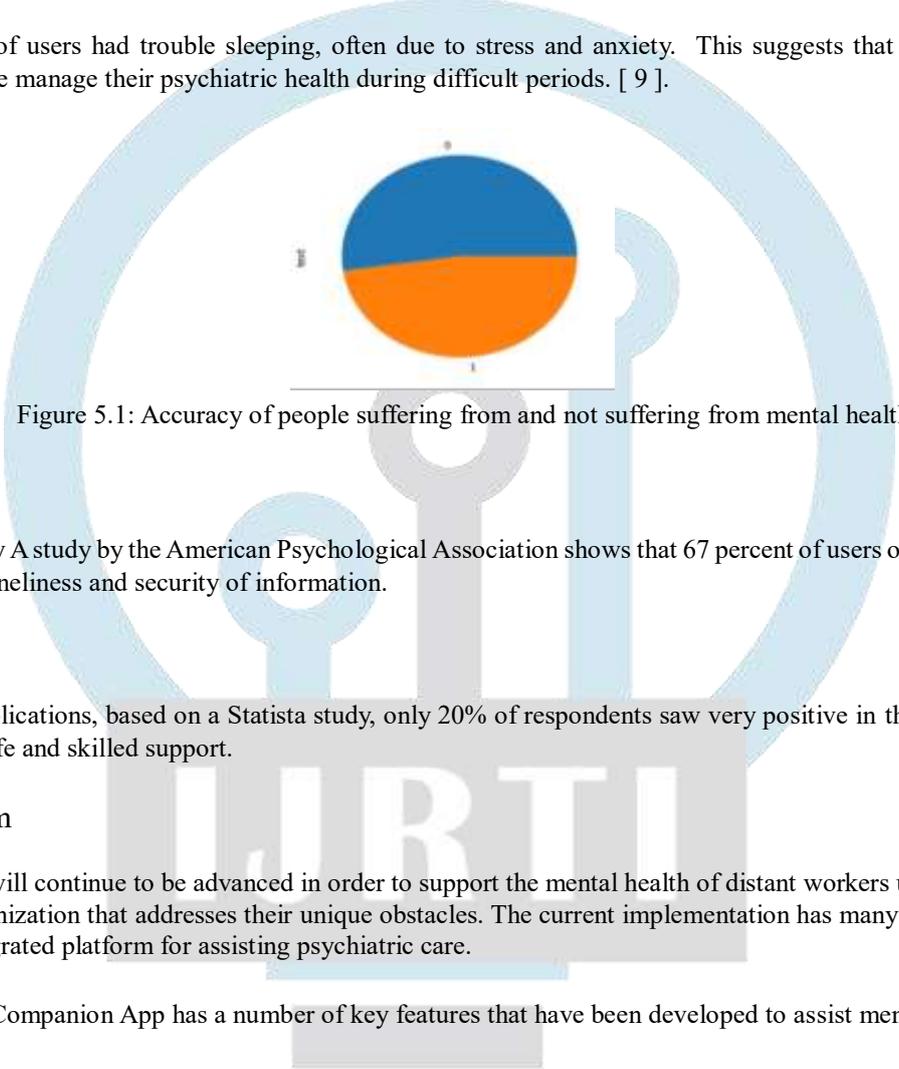


Figure 5.1: Accuracy of people suffering from and not suffering from mental health issues

Privacy Concerns:

Information Sensitivity A study by the American Psychological Association shows that 67 percent of users of a psychiatric wellness app complain about loneliness and security of information.

Trust in Technology:

Self-confidence in applications, based on a Statista study, only 20% of respondents saw very positive in the ability of psychiatric software to provide safe and skilled support.

6. Proposed System

The Companion App will continue to be advanced in order to support the mental health of distant workers using a comprehensive and user-friendly organization that addresses their unique obstacles. The current implementation has many features and functions which make it an integrated platform for assisting psychiatric care.

Central Features-The Companion App has a number of key features that have been developed to assist mentally ill people. [13].

Mental Health Assessments:

The user could occasionally ignore self-assessments. Devices based on accepted psychological tests, such as GAD-7 anxiety and PHQ-9 depression, enable users to assess their mental state. To enable them to monitor changes over time, the information is optically represented on the screen.

Resource Library:

A bourgeois library of support, such as articles, videos, and podcasts, which protects a broad spectrum of psychiatric disorders. Content related to coping plans, mindfulness exercises, and advice on how to balance project and life created by the client. Devices are dynamically suggested based on the consumer's choices and their responses to valuation.

Community Support:

An anonymous group forum within the app enables users to connect, share events, and back one another. In order to provide a safe atmosphere, the forum should be moderated by a therapist specializing in psychiatric vitality care, stimulating constructive dialogue to avoid any problems.

AI Chatbot for Immediate Support:

Automated reasoning Digital assistants act as a client's immediate tax return, provide knowledge, cope with approaches, and converse with them in distress.

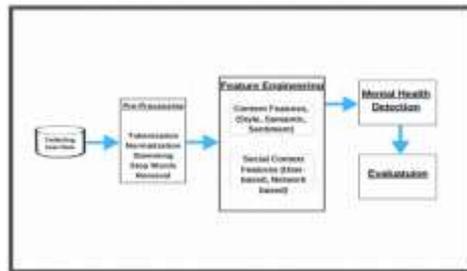


Fig 6.1 System Architecture

Privacy and Security

Providing the delicate essence of information above mental vitality, the app rank statistics defense. The present entails the use of a powerful encoding protocol, the anonymization of civilization obligations, and compliance with the relevant legislation on information security.

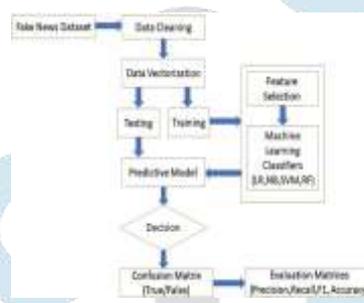


Fig.6.2 Flow Chart of Mental Health Tracker

7. Methodology

The Companion App for Mental Fitness Requirements shall continue to be updated in a systematic way. Usually, there are many phases that promise obedience with client needs and expectations, such as high rear, ease of use, and safety. A brief description of the instrument that could last for a long time in order to be used will be provided .

1. Those **causes and prerequisites** which anchor the situation throughout the fact-finding phase and those which are not apparent causes and prerequisites should be distinguished.
2. **Design**-In this stage, the focus shifts to creating a user-friendly interface and experience.
3. **Development**-During this phase, the technical team builds the app based on design and requirements.
4. **Testing**-Ensures the functionality of the app and if it meets user's expectations or not.
5. **Deployment**-The application will be deployed in a real time environment.

8. Result

First, complete buyer realizations will be obtained through analysis, including interviews and surveys, which will reveal potential users' needs, choices, and behavior. Moreover, the analysis of existing competitors will help identify discrepancies within the store, allowing the party to create a unique selling mark for the novel app. [8].

After the deployment, the app will continue to be successfully launched in a related App Store due to the initial inflow of downloads via capable branding methods. This commentary cringle will empower the group to abandon timely improvements based on client demands, add new features, and improve the current workforce. [12].

Finally, the future evolution of the app will be guided by a focus on data-driven decision-making. The group will continue to be competent in terms of perception of retention rates and necessary improvements by analysing customer participation patterns. This iterative cycle will ensure that the Companion App continuously evolves to meet users' demands competently, establishes itself as a respected supplier in terms of improving psychiatric welfare, and returns the user to the top of the journey to a better psychiatric condition.

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1. Add Entry
2. View Entries
3. Save Entries
4. Load Entries
5. Exit
Enter your choice: 1
Enter the date (YYYY-MM-DD): 2001-10-10
Enter your mood: sad
Enter any additional notes: I am very sad

1. Add Entry
2. View Entries
3. Save Entries
4. Load Entries
5. Exit
Enter your choice: 

```

Figure 8.1. Output

9. Conclusion

Ultimately, the progress of the Companion App in support of psychiatric vitality represents an important opportunity to respond to the increasing demand for accessible and capable psychiatric aid. The app is ready to make a significant impact on the lives of its users by organizing customer information and behavior throughout the research, design, and development phases.

The focus on user-centred design ensures that the app will appeal to a wide range of consumers and provide personalised features to meet their specific health needs. The establishment of a critique mechanism and data-driven methods will enable it to adjust dynamically to client options and the evolution of psychiatric care as the app moves from initial launch to continuous evolution.

Finally, the Companion App aims not only to provide information and support but also to enhance the perception of society and connection among users. By doing so, it seeks to raise human beings above their mental well-being journey, advancing welfare and resilience on a constantly demanding planet.

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