COGNION- COGNITIVE COMPANION

A PROJECT REPORT

Submitted by

Noraiz Amaan	**21BCE11207**
Tushar Kumar	**21BCE11274**
Diksha Sinha	**21BCE11141**
Kumar Rishiraj	**21BCE11356**
Harsh Kumar	**21BCE11296**

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

in
COMPUTER SCIENCE AND ENGINEERING

SCHOOL OF COMPUTING SCIENCE AND ENGINEERING

VIT BHOPAL UNIVERSITY

KOTHRI KALAN, SEHORE

MADHYA PRADESH - 466114

November 2022

VIT BHOPAL UNIVERSITY,KOTHRI KALAN, SEHORE

MADHYA PRADESH – 466114

BONAFIDE CERTIFICATE

Certified that this project report titled **Cognion- Cognitive Companion** is the bonafide work of **Diksha Sinha(21BCE11141), Noraiz Amaan (21BCE207), Kumar Rishiraj(21BCE11356), Tushar Kumar(21BCE11274), Harsh Kumar (21BCE11296),** who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported here does not form part of any other project / research work on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

PROGRAM CHAIR   **PROJECT GUIDE**
 Preetam Suman   Nitin Kumar Mishra
Senior Assistant Professor   Assistant Professor
School of Computer Science and Engineering   School of Computer Science and Engineering
VIT BHOPAL UNIVERSITY   VIT BHOPAL UNIVERSITY

The Project Exhibition II Examination is held on _____

ACKNOWLEDGEMENT

First and foremost, I would like to thank the Lord Almighty for His presence and immense blessings throughout the project work.

We wish to express my heartfelt gratitude to Dr……………., Head of the Department, School of Computer Science & Engineering for much of his valuable support and encouragement in carrying out this work.

We would like to thank our guide Mr. Nitin Kumar Mishra for continually guiding and actively participating in my project, giving valuable suggestions to complete the project work.

We would like to thank all the technical and teaching staff of the School of Computer Science & Engineering, who extended directly or indirectly all support.

Last, but not the least, We are deeply indebted to our parents who have been the greatest support while we worked day and night for the project to make it a success.

LIST OF ABBREVIATIONS

1. COGNION: Cognitive Companion
2. HTML: HyperText Mark-up Language
3. CSS: Cascading Style Sheets

ABSTRACT

In this project, we are building a website named "COGNION," to help people suffering from mental illness. The website can be the ultimate solution to many of their problems. The patients can book consultants and doctors and their check-ups can be done via online mode. The users can also chat and make friends anonymously without the fear of being judged. The consultants can also create a room for open seminars to boost the motivation of the people. There is also a tab for posting blogs, where people can share their stories so that everyone can fight together to eradicate mental illness. We also have a feature where the user can rate the therapists as per their experience. Finally, it is for the people, to upgrade the world, making it a better place to live.

TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION

COGNION (COGNITIVE COMPANION), where the people who need mental care and guidance can take it without any threat to their privacy.

MOTIVATION FOR THE WORK

Mental and physical health are equally important components of overall well being. For example, depression increases the risk for many types of physical health problems, particularly long-lasting conditions like diabetes, heart disease, and stroke. Similarly, the presence of chronic conditions can increase the risk for mental illness.

But in today's society, mental illness is all-pervasive. Additionally, our society downplays mental illness; this way of thinking needs to shift.

Because so many people in the current society experience depression, there are a lot of suicidal cases. One case includes the student from VIT Bhopal who committed suicide.

Our goal is to assist these people. We want to use our knowledge for the benefit of others, and only then will we be able to call ourselves responsible citizens of this democratic nation, India.

INTRODUCTION TO THE PROJECT [INCLUDING TECHNIQUES]

A platform called Cognion (Cognitive Companion) will help those with mental illnesses get over their issues.

This site will assist them by giving them anonymous companions because many people fall into the trap of depression simply because they struggle with loneliness.

They can talk to them, confide in them about their troubles, share smiles and tears, and more and thus feel better.

In order to ensure that the stories can reach everyone and that everyone can understand that they are not the only one in this struggle and that they are not alone, our site also has a tab for publishing blogs, where anyone may read and write blogs. The blogs can inform those with similar problems how others have solved their concerns, enabling them to assist themselves.

Booking a consultant, psychologist, or doctor is another option that enables users to receive competent therapy. People from all around the world will be able to book any doctor from anywhere. Additionally, the doctors will have more patients to work with.

The next feature includes that the consultants can host free online seminars for the public, and anyone who registers for them is welcome to attend.

PROBLEM STATEMENT

Build a website to help the people suffering from mental illness

OBJECTIVE OF THE WORK

Raise awareness about the mental health continuum, reduce stigma associated with mental illness, promote help seeking behaviors and emotional well-being practices, and prevent suicide through individual education and outreach events. Mental health has a direct impact on academic success and it is important to cultivate practices that support emotional well-being. When mental health is overlooked, it can have detrimental effects on the individual and the community. 1 in 4 adults live with a mental health disorder. 1,100 college students die by suicide each year and regretfully, suicide is the 2nd leading cause of death for college students. But there is hope.

ORGANISATION OF THE THESIS

- Cognion(cognitive Companion), for the people suffering from mental illness.

- People can book consultant as per their convenience
- Open seminars can help build confidence and motivation

- Blogs can help people share their personal stories

LITERATURE REVIEW

INTRODUCTION

The main use of the system is to help the users to get over their mental illness. The system can be used as a way to make new friends too by the use of our anonymous chatting option.

For the frontend, we have used

a)   HTML: HTML (HyperText Markup Language) is the code that is used to structure a web page and its content. For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables. As the title suggests, this article will give you a basic understanding of HTML and its functions.

b)   CSS: CSS (Cascading Style Sheets) is used to style and layout web pages — for example, to alter the font, color, size, and spacing of your content, split it into multiple columns, or add animations and other decorative features.

c)   JavaScript: JavaScript is a powerful programming language that can add interactivity to a website.

For the Backend, we will use:

a)   NodeJS: Node js is used for backend implementation as Node.js is an open source, cross-platform, back-end JavaScript runtime environment that runs on a JavaScript Engine and executes JavaScript code outside a web browser, which was designed to build scalable network applications.

b)   Firebase: Firebase is a set of hosting services for any type of application. It offers NoSQL and real-time hosting of databases, content, social authentication, and notifications, or services, such as a real-time communication server. Firebase Authentication allow users to sign in to your app using one or more sign-in methods, including email address and password

sign-in, and federated identity providers such as Google Sign-in and Facebook Login.

c)   React JS : The React. js framework is an open-source JavaScript framework and library developed by Facebook. React is a JavaScript library for building user interfaces. React is used to build single-page applications. React allows us to create reusable UI components. It's used for building interactive user interfaces and web applications quickly and efficiently with significantly less code than you would with vanilla JavaScript.

CORE AREA OF THE PROJECT

Our projects' characteristics are:

a) Chatting anonymously and making acquaintances: People occasionally withhold their difficulties from even their friends out of concern that they will be criticized. We, therefore, therefore develop a remedy for this. We have established the practice of anonymous talking, which allows one to converse with anyone without worrying about their identity being discovered.

b) Scheduling an appointment with a consultant or therapist: By scheduling an appointment with a therapist, the user can access any doctor from around in the world.

c) Blogging: A platform for sharing personal narratives with others

d) Holding seminars: To help the audience boost their confidence.

Moreover, the patients can rate their therapist, so that their fellow mates can know who is the best one for their treatment. The ratings will be done one using stars (1-5). The system will also show the number of patients who

booked for the particular doctor and the percentage of patients who were satisfied with the service.

OBSERVATION FROM THE LITERATURE SURVEY

a) More than 970 million individuals worldwide are affected by mental illness.

b) More than 8,00,000 suicides annually

c) Sixty per cent of young people with serious depression do not receive any mental health care.

d) The age range of 18 to 29 suffers the most from depression.

e) Compared to men, many more women suffer from mental illness.

SUMMARY

Therefore, there ought to be a means to overcome this stigma, and that's how "COGNION" came to be.

SYSTEM ANALYSIS

SYSTEM ANALYSIS

- Our webpage gives us the option to login
- Share our thoughts with people while talking
- Contact us when you need help or you want to give us some feedback or suggestion.

LIMITATIONS

- At this stage we have only text option to communicate
- For now, in our website we don't have doctors for people suffering from mental health but we will be adding that soon.

WORK DONE

a)   Log-in authentication (sign in, sign out) through firebase. The new user can register into the system using their emails. The existing user can log in into the system.

b)   Anonymous Chat: People occasionally withhold their difficulties from even their friends out of concern that they will be criticized. We, therefore, develop a remedy for this. We have established the practice of anonymous talking, which allows one to converse with anyone without worrying about their identity being discovered. To create hangout, we've used react JavaScript for the frontend and in backend we have used firebase firestore database.

c)   Contact Us: The customers can contact the members of Cognion using this "contact us" option. The email they can use is "companioncognitive@gmail.com". They can provide feedback to the team to improve the given system. In Contact Us, we have developed a send email API which help us customer to communicate with use, and in order to develop the API we have used nodemailer module in node javascript.

d)   Doctor Consultation: We've added a feature where the user can fix an appointment with the psychologist, once arranged, they'll receive a scheduled Google Meet link in their email 10 minutes before the session, and they'll be able to join the appointment through the link.

e)   Blogs: We've developed a separate homepage for our new feature, which allows users to share their experiences; on this webpage, they will read blogs which can help them in their lives

OBSERVATION

5.1 Our proposed model is compared with basic recommender models in this section, Sentiment Analysis model and Hybrid models were used by us as base model incorporating our proposed model. Hybrid model is created by use of Collaborative Filtering and Content Based Filtering. Movies are recommended on the basis of similarity of awesome features like the genre, director, actor of the particular movie whereas Sentiment Analysis model takes only the similarity of user's tweets and ratings into consideration. Considering the qualitative results of some of the recommended movies by our proposed model is shown in Table III which also shows that some of the movies are common which were taken from IMDB and TMDB. In Table III, Qualitative analysis of Wonder Woman movie is shown and some movies are intersecting with either IMDB or TMDB

FUTURE ENHANCEMENT AND CONCLUSION

INTRODUCTION

Our project aims at minimizing suicidal deaths in the world by providing proper guidance and medication to the people who are mentally unfit at the correct time, without breaching their privacy. We want a world where anxiety won't exist.

FUTURE ENHANCEMENTS

Till date we tried our best to come up with maximum output through our project. We have included many features in our website for example, Sign up through Google Account, anonymous chats etc. In future, we aim to include voice calling and video calling. Also, we will try to bring up best doctors on our website & deliver medicines and drugs prescribed by them to our patients through our website in minimal time. We will also include the feature of group sessions with Psychologists for the people suffering from trauma and depression which would help them relax and recover faster. At last we will be improvising our website and make it user friendly.

CONCLUSION

There are many people suffering from mental illness, and through this project called "COGNION," we can reduce the number of people suffering from the same. This can be a way to come out from the depression stigma of society. The main aim of our project is to do something for the people so as to upgrade our society and make it a better place.

The work done are:

a) Login authentication

b) Anonymous chatting

c) Contact us

d) Blog Page

e) Doctor Consultation(using google meet)

f) Doctor's appointment

There are works still left to be completed, i.e. adding the blog page, adding the page for booking consultants and conducting seminars.

This project has developed our thinking and developed our interest in reducing this important but mostly ignorant factor called "Mental Health." We will not stop here, rather would work on this and deploy it on a global level.

REFERENCES

- https://www.w3schools.com/
- From Wikipedia, "HTML", http://en.wikipedia.org/wiki/html.
- https://www.kaggle.com/datasets/meetnagadia/district-wise-mental-health-patients20212022
- https://www.kaggle.com/datasets/shariful07/student-mental-health
- https://www.kaggle.com/datasets/twinkle0705/mental-health-and-suicide-rates