SOMEONE TO TALK

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Abstract—The purpose is to present the problems faced by the people due to lack of communication which leads to depression, lower self confidence, stage fear, introvert, fear of being judged. All these factors are affecting someone due to the fact that there is a lack of time for someone to listen too, and someone to share things with. So, to overcome this a user friendly application shall be designed as such which can talk to anyone when needed and a special feature of mood recognizer which will detect your mood and will talk accordingly.The main motivation of this project is that users can improve their personal growth and also reduce fear of communication with people and this is the main reason that we will make an application named "Someone to talk" in which anyone can talk at their suitable time and overcome their fear to open up with people comfortably.

Keywords—ML(Machine learning), Mobile Application,UI(user interface)

I. INTRODUCTION

A. Overview

This application is for users who can interact with our AI animation.In this app when a user enters our app will first detect the user face and then predict user emotion by emotion detection after that the animation interacts with the user according to the user mood so the user can comfortably interact with our AI animation.The feature which we are going to add is face recognition by which the assistant can predict your mood and according to your mood assistance will interact with you.a place for you to express how you really feel. App will help you connect to a fun, uplifting, positive, and understanding making it easy to share your feelings and lift your mood! you're never alone.

Figure 1.1: Emotion recognition

Emotions govern our daily lives; they are a big part of the human experience, and inevitably they affect our decision-making.Thanks to natural language processing, this subjective information can be extracted from written sources such as reviews, recommendations, publications on social media, transcribed conversations, etc., allowing us to understand the emotions expressed by the author of the text and therefore act accordingly.

B. Aim and Objective

The aim of this project is to develop a user-friendly communication application that serves as a reliable platform for individuals facing emotional challenges due to a lack of meaningful communication. By integrating advanced technology, this application aims to enhance mental well-being, promote self-confidence, and reduce feelings of depression, stage fear, introversion, and the fear of judgment. The primary focus is on creating a supportive environment where users can freely express their emotions and thoughts, eliminating the barriers of time constraints.

C. Problem Statement

In today's Fast-Paced world, the lack of meaningful communication channels has given rise to a host of psychological challenges, including depression, diminished self-confidence, stage fright, introversion, and the fear of judgment. These issues stem from the absence of empathetic listeners and the constraints of time, leaving individuals isolated in their emotional struggles. Recognizing the urgency of this problem, the objective is to develop a communication application that acts as a dependable support system. The challenge lies in creating a user-friendly platform that transcends the limitations of conventional communication, addressing the psychological barriers caused by time constraints and the unavailability of understanding listeners.

D. Motivation of Project

- Nowadays, people have stopped sharing things, due to the fear of being judged.
- Because of that they talk less and cannot freely talk to anybody And by this they get depressed.Also, some are not available to talk because of their busy schedule.

- It helps introverts to communicate. Other than that, the students can also use it to overcome stage fear.
- So to overcome that we will make an application named Someone to talk in which anyone can talk at their suitable time.
- The main motivation of this project is that users can improve their personal growth and also reduce fear of communication with people.

II. MODULES

A. Natural Language Processing

it is the automatic extraction, analysis, and generation of human language. NLP algorithms parse sentences in various ways.'Human-like language processing' reveals that NLP is considered a discipline within Artificial Intelligence (AI). And while the full lineage of NLP does depend on a number of other disciplines, since NLP strives for human-like performance, it is appropriate to consider it an AI discipline.

B. STT AND TTS

Text to speech is computer generated and can often be made to read fast or slow. Voice Levels vary, but some words sound very human. There are also many computer-generated sounds that resemble human speech. Speech recognition is part of the sub-field of computer science and computer language that develops methods and techniques that allow spoken words to be recognized and translated into computer text. Speech recognition is currently considered one of the most promising technologies for the future.

C. Virtual Assistant

To understand diverse natural language commands, virtual assistants today are trained with numerous labor-intensive, manually annotated sentences. presents a methodology and the Genie toolkit that can handle new compound commands with significantly less manual effort. We advocate formalizing the capability of virtual assistants with a Virtual Assistant Programming Language (VAPL).

III. MODEL DESIGN

A. User Authentication and Profile Management

- User Registration: Allow users to create accounts using email
- Login : Implement secure login functionality for authenticated sessions.

B. Emotional State Analysis and Mood Recognition

- Emotion Recognition: Utilize machine learning algorithms to recognize emotional states based on user inputs.
- Mood Mapping: Map recognized emotions to corresponding mood categories for personalized responses.

C. Chat and Messaging System

- Real-time Messaging: Implement real-time chat functionality for instant communication between users and AI.
- Multimedia Support: Allow users to send text and voice messages for diverse communication.

D. Personalized Responses and Interactions

- Empathetic Interactions: Craft empathetic responses to create a supportive environment for users expressing their emotions.
- User Engagement: Implement interactive elements and prompts to keep users engaged during conversations.

IV. RESULT AND DECISION

A. Tools and Technology

- ML(Machine Learning): Emotion recognition Face, Detection ,OpenCV(Open Source Computer Library)
- Mobile App Platforms: Google's Android platform using Java/Kotlin programming languages and Android Studio IDE.
- UI/UX Design Tool:
  Adobe XD: Popular design tools for creating wire frames, mockups, and interactive prototypes.\
- SQL : Used for Database connectivity
- Google colab:used for Emotion detection modal training

B. Implementation
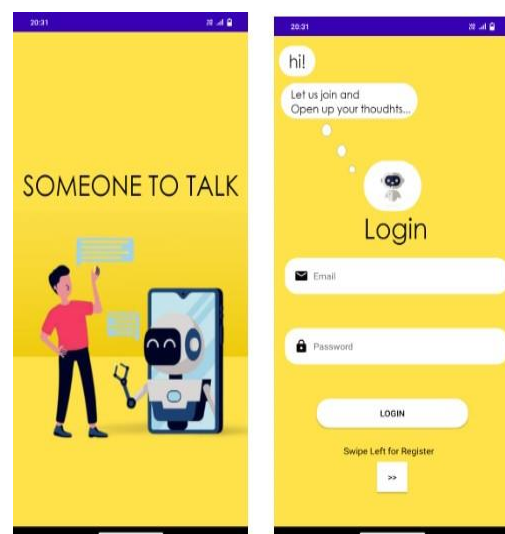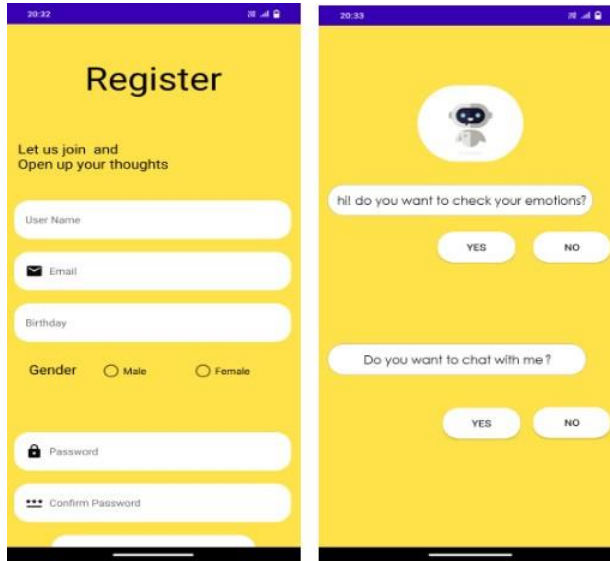
V. CONCLUSION AND FUTURE WORK

A. Conclusion

The "SOMEONE TO TALK" project addresses a crucial issue in today's fast-paced society: emotional isolation. By developing an intuitive communication application, the project aims to provide a safe space for individuals dealing with various emotional challenges. The innovative use of a mood recognition system, powered by machine learning algorithms, sets this application apart. This system accurately analyzes user inputs, allowing for personalized and empathetic interactions, which are essential for fostering understanding and support. A lot of research has been done in this field to improve the accuracy of the actual operation of this model. The proposed model achieved up to 93
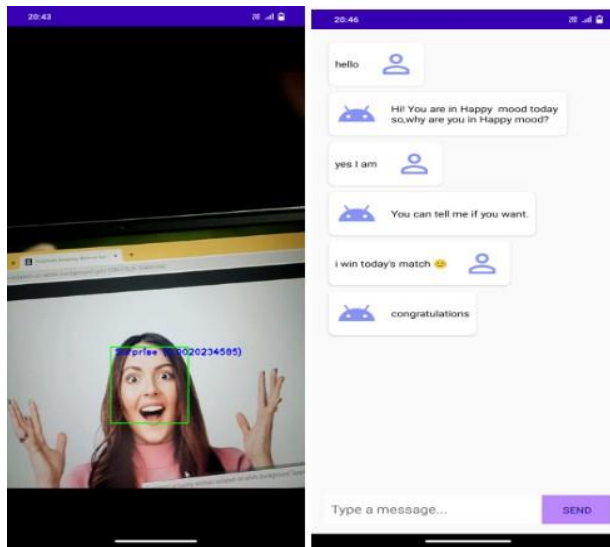
B. Future Work

Emotion Recognition Refinement: Continuous Monitoring: Develop real-time emotion recognition, allowing the system to adapt and respond dynamically as the user's emotional state changes during a conversation Incorporate Facial Expressions: Explore the integration of facial recognition technology to analyze users' facial expressions, providing additional data for more accurate emotional understanding, User Experience and Interface: User Feedback System: Implement a feedback mechanism for users to provide suggestions, helping in continuous improvement of the application. Accessibility Features: Ensure the application is accessible to users with disabilities, incorporating features like screen readers and voice commands, Research and Collaboration: Collaborative Research: Partner with mental health professionals and researchers to conduct studies on the application's impact, refining algorithms based on research findings. User Experience Studies: Conduct regular user experience studies to understand user needs better and enhance the application accordingly, Global Expansion: Localization: Translate the application into multiple languages to reach a broader global audience, ensuring cultural nuances are respected. Crisis Support: Collaborate with crisis helplines and organizations worldwide, integrating emergency support features for users in immediate distress, Ethical AI and Bias Mitigation: Bias Detection: Implement tools to detect and mitigate biases in AI responses, ensuring fair and unbiased interactions for users from diverse backgrounds. Ethical Guidelines: Establish clear ethical guidelines for AI interactions, addressing sensitive topics and ensuring responsible use of the technology.

C. Accuracy Table

Emotion	Precision	Recall	F1-Scoe	Accuracy
Surprise	0.62	0.67	0.64	0.65
Happy	0.93	0.95	0.94	0.94
Neutral	0.92	0.91	0.91	0.91
Sad	0.79	0.76	0.75	0.77
Angry	0.81	0.79	0.80	0.80
Fear	0.60	0.64	0.62	0.60
Disgust	0.66	0.65	0.66	0.66