Voice Based Email System for Blind Using Face Recognition

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***Abstract*— Everyone requires communication technologies in the current environment in order to connect with one another. Modern communication technologies are important for enhancing social and personal engagement. Using both technology and the Internet facilitates communication. Due to visual and physical challenges, however, a physically challenged person suffered greatly when using this device. Several technological advances have been made, yet they cannot be used by regular consumers. This study attempts to develop an email system that enables even new users and persons with physical disabilities to communicate using it without any prior training. The email system only functions with the aid of mouse clicks and voice conversion; no keywords are used. Due to text to speech and speech recognition, even those who cannot read can send emails. The system is entirely built on responsive vocal contact, making it simple and hassle-free to use the technology. Manner. The system is well-built so that emails may be sent rapidly. There are alternatives for sending emails and carrying out every action the email system requires.**

***Index Terms*— Email, Voice, Blind, Speech Recognition, Text To Speech, STT.**

I. INTRODUCTION

To enable voice-based navigation, the navigation system makes use of TTS (Text-to-Speech) and STT (Speech-to-text for blindness). The suggested system is inexpensive and is used by blind individuals independently. Blind folks can now easily access the application thanks to this. Technology has been employed in an increasing number of studies to assist handicapped persons in assimilating more completely into a global society. The application takes into account a system of instant messaging to facilitate communication between blind users and other users connected to the network.

The development of computer technology has given blind individuals across new opportunities today. It has been noted that Our INDIA is home to about 60 percent of the world's total blind population. In this paper, we present the voice mail architecture that individuals with disabilities utilize to quickly and easily access the operating system's email and multimedia features. The cognitive effort required for blind people to recall and type keyboard characters will be lessened by this architecture. It also benefits people who are physically disabled.

II. PROPOSED SYSTEM

A. RECOGNITION OF SPEECH

Voice recognition refers to a feature that allows gadgets to follow spoken commands. Voice recognition is a branch of artificial intelligence that focuses on how language is used by humans and machines to communicate, both orally and in writing. Voice recognition refers to a feature that allows gadgets to follow spoken commands.

B. TTS

Text to speech (TTS), often known as speech synthesis, is a technique that turns written text into spoken voice output. The original purpose of text-to-speech systems was to help the blind by providing a computer-generated voice that would "read" text to the user. Voice synthesis is the creation of human speech through artificial means. A speech computer, also known as a speech synthesizer, is a computer system used for this purpose and can be incorporated into hardware or software applications. Normal language text is translated into speech by a text-to-speech (TTS) system; other systems translate symbolic linguistic representations, such as phonetic transcriptions, into speech.

C. STT

Speech recognition (SR), an interdisciplinary area of computational linguistics, provides approaches and technology that allow computers to recognize and translate spoken language into text. Other names for it include "computer speech recognition," "automated speech recognition," and simply "speech to text" (STT). It draws on expertise and study from the domains of linguistics, computer science, and electrical engineering.

Software that converts spoken utterances into written text for use in word processors or other display formats is known as speech-to-text software. Anyone who has to produce a lot of written content quickly and accurately will find this kind of speech recognition software to be of great value. Also, it benefits those with disabilities.

D.AUTHENTICATION ON THE FACE

Using pictures of their faces, users of the Face Authentication system can access internet services, real-world locations, and other resources. Face authentication, also known as face or facial recognition, depends on the built-in sensing capabilities of mobile and other devices. It works by identifying and measuring facial features in an image. Facial recognition can identify human faces in images or videos, determine if the face in two images belongs to the same person, or search for a face among a large collection of existing images. When a user logs in or registers, biometric security systems use facial recognition to individually identify each user and to bolster user authentication.

III. SYSTEM ARCHITECTURE

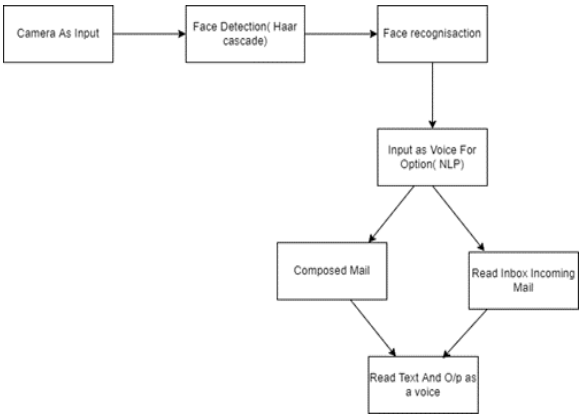


Fig1: System Architecture

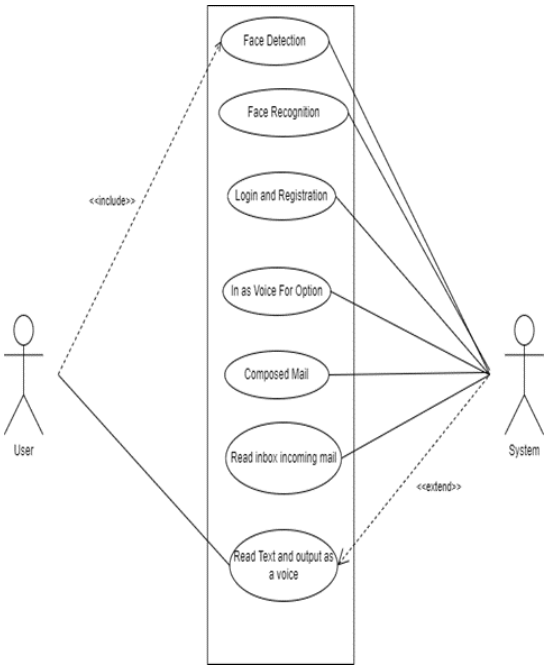
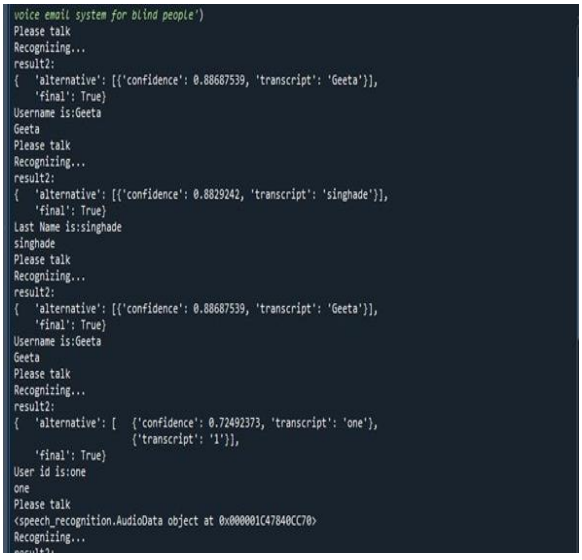


Figure 2: Use case Diagram

IV.CONCLUSION

We put forward our project to prove a way for the blind people to easily access their Mails with a good interactive Manner and we use Speech to text and text to Speech Method in our Project. Our project makes email handling and access easier for blind people. The difficulty that blind individuals have accessing mail can be solved. The visually challenged will benefit from easy access to email service Efficiently

V. RESULT



```
voice email system for blind people')
Please talk
Recognizing...
result2:
{   'alternative': [{'confidence': 0.88687539, 'transcript': 'Geeta'}],
    'final': True}
Username is:Geeta
Geeta
Please talk
Recognizing...
result2:
{   'alternative': [{'confidence': 0.8829242, 'transcript': 'singhade'}],
    'final': True}
Last Name is:singhade
singhade
Please talk
Recognizing...
result2:
{   'alternative': [{'confidence': 0.88687539, 'transcript': 'Geeta'}],
    'final': True}
Username is:Geeta
Geeta
Please talk
Recognizing...
result2:
{   'alternative': [   {'confidence': 0.72492373, 'transcript': 'one'},
                       {'transcript': '1'}],
    'final': True}
User id is:one
one
Please talk
<speech_recognition.AudioData object at 0x000001C47840CC70>
Recognizing...
```

Figure 3: register user

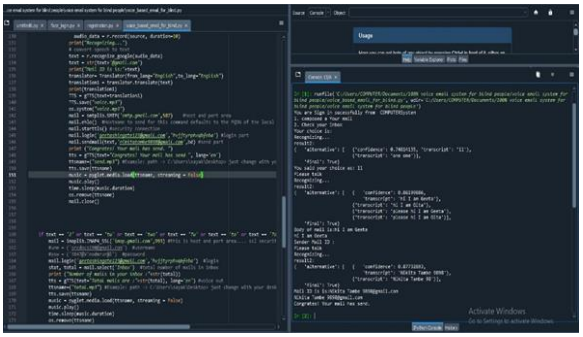


Figure 4: Compose and Check Inbox

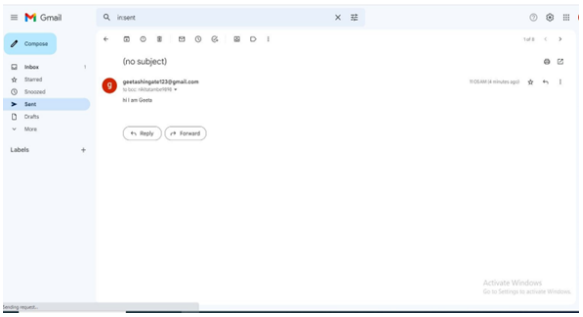


Figure 5: Receive Mail

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