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Email Processing for Blind Using Voice Commands

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Abstract

Many fields have seen a significant change since the advent of the internet. People today can access any information they desire while sitting at home thanks to the internet, which has made life incredibly simple. Communication is one of the key areas that the Internet has transformed. When we talk about online communication, email is the first thing that springs to mind. Emails are thought to be the most trustworthy form of online communication for sending or receiving sensitive information. However, there is a unique requirement for accessing the Internet as a human, and that requirement is that you must be able to see. You must be wondering what kind of standard this is since everyone with sight can see it. However, there are also particularly abled persons in our society who lack your talent. Yes, there are some blind or visually impaired individuals who are unable to perceive objects, including the computer screen and keyboard. More than 250 million visually impaired persons live in the world, according to a poll. That means that about 250 million people lack basic Internet and email literacy.

Keywords: django, Web Development, JavaScript, Google web speech Api,HTML, CSS.

1. INTRODUCTION

1.1 Introduction

The only way a person who is blind or visually impaired can send an email is by dictating the entire message to a third party who is not blind or visually impaired, who will then write the message and send it on the blind person's behalf. However, this is not the proper course of action in this situation. A visually impaired person finding assistance frequently is quite unlikely. Although our society criticizes people with disabilities in particular for these reasons . Therefore, we developed this project idea that gives the user the opportunity to write emails using speech, with the goal of improving society and granting equality to such particularly abled people. commands are utilized in a high tech manner without the use of a keyboard or any other visual aids. The program, as the name implies, will be a web-based tool for visually impaired people that uses interactive voice response (IVR), allowing everyone to manage their email accounts with just their voice in addition to being able to read, send, and complete all other useful functions. The user will respond to voice orders from the system asking them to carry out specific actions. The fundamental advantage of this system is that the user just needs to answer by speaking and clicking a mouse; the keyboard is

completely eliminated. You must now be wondering how a blind person will be able to view the the ideal spot on the screen to click using the mouse. However, this system will only take action in response to a user's left- or right-click, regardless of where the pointer is on the screen. This gives users the flexibility to click wherever on the screen without regard to where the cursor is located. For transmitting and receiving certain crucial information over the Internet, emails are the most dependable mode of communication. However, there is a requirement that you be able to see in order for people to access the Internet. However, there are also those with disabilities in our society who lack your talents. Some blind or visually impaired people are unable to see You cannot see the keyboard or computer screen as a result. There are more than 240 million visually impaired persons in the world, according to a poll. In other words, about 240 million people don't know how to use the Internet or email. The only way a person who is blind or visually impaired can send an email is by speaking the entire email to a person who is not blind or visually impaired, who will then write the email and send it on the blind person's behalf. But this is not the proper course of action in this situation. It is quite improbable that someone who is blind will always be able to locate assistance.

2. Literature Survey

• **Voice Based System in Desktop and Mobile Devices for Blind People" [1]:**"Voice Based System in Desktop and Mobile Devices for Blind People" is the topic of this article. Blind persons can use email and other multimedia features of the operating system (songs, text) thanks to voice mail design.SMS messages can also be read by the system itself in mobile applications. The development of computer technology has given visually challenged persons worldwide new opportunities today. It has been noted that India is home to over 60% of the world's total blind population. This paper describes the voice mail architecture used by blind persons to quickly and easily utilize the operating system's multimedia and email features. Additionally, this architecture will lessen the mental effort required by blind people to recall and input keyboard characters. There is a wealth of information regarding technical advancements for those who are blind or visually impaired. This covers the creation of screen readers, screen magnifiers, and text-to-Braille systems. Recently, efforts have been made to create tools and technology that will make it easier for blind persons to use internet-based technologies. For the Blind People, early attempts included speech input and input for surfing. The web page on IBM's home page has an intuitive user interface and converts text to speech with various gender voices for reading texts and connections. The developer must create a complicated new interface for the screen reader to recognize in order to navigate the intricately designed graphical web pages, which is a drawback. easy browsing method, It creates a two-dimensional division in a web page. This drastically streamlines the structure of a web page and makes it simpler to browse. A tree structure was created from the HTML page by another web browser 6 by examining the links. It did not turn out to be particularly effective for surfing despite its attempts to organize the sites that are linked together to improve navigability. After then, it failed to address requirements for the present page's navigability and usability. guided was a different browser created for those who are blind or visually impaired, and it included a TTS engine. To depict the page in a user-friendly way, this system uses a sophisticated text extraction technique. The conditions for commercial use were still not met, though. considering the situation in India The two web browser frameworks that Blind people use to access the internet, including emails, are Shruti Drishti and Web Browser for Blind. ASR and TTS systems for the Indian language are integrated into both systems. However, cell phones and other tiny devices cannot be used with the currently available systems.

Voice Based Search Engine and Web page Reader" [2]: This study intends to create a search engine that only supports voice-based human-machine interaction. An innovative voice-based search engine and web page reader is shown that enables users to command and manage the web browser using their voice. The current search engines receive text requests from users, respond by retrieving the necessary documents from servers, and present the results as text.Even though the current web browsers can play audio and video files, a user must first make a request by entering some text in the search text box before they can utilize Graphical User Interfaces (GUI) to play the audio or video they are interested in By eliminating noise, speech recognition accuracy can be increased. In In a proposed iterative speech enhancement technique, the speech and noise components are separated using a Bayesian approach in a wavelet domain. To take use of the chosen features in the representation of the time frequency space, the suggested method is created in the wavelet domain. There are two stages: a step for estimating noise and another for separating signals.

3. OVERVIEW OF THESYSTEM

3.1 Existing System

A total of 4.1 billion email accounts were created up to 2014, and by the end of 2018, 5.2 billion records will have been assessed. As a result, messages are the most common form of correspondence. The most widely accepted mail benefits, which we utilize daily, are inaccessible to those who claim to have no prior experience. This is since no office is provided, allowing the person in front to clearly hear the content of the screen. Due to their inability to visualize what is now visible on screen, they are unable to discern where to click in order to complete the required activities. For what it's worth, using a PC for an externally validated person isn't that beneficial. even if it is simple to understand, a typical client. Even though there are numerous screen readers available, certain minor issues still arise for these users. Screen readers read out whatever is on the screen, however they are unable to track mouse movements, so to carry out those actions, the user must use different console channels.

3.1.1 Disadvantages of Existing System

- There is now such technology in previous days

3.2 Proposed System

The proposed technology is entirely unique in concept and has nothing in common with current postal delivery systems. The accessibility of the suggested system is the most crucial factor that has been taken into consideration. Only when a web system can be utilized effectively by both able-bodied and disabled users can it be claimed to be completely accessible. These accessibility options are not offered by the existing systems. Consequently, the system we are creating is entirely different from the one in use today. Our system places a greater emphasis on user friendliness for all types of people, including normal users who are visually impaired and illiterate, in contrast to the current system, which places more emphasis on user friendliness for normal users. IVR is the foundation of the entire system.

3.2.1 Advantage:

- The disabilities of visually impaired folks are thrashed.
- This method makes the disabled folks desire a standard user.
- Completely voice based, wiped out the use of keyboard and mouse.
- Efficient and robust
- This design also scales back psychological feature load taken by blind to recollect and kind characters mistreatment keyboard.

User friendly.

3.3 Methodology

In this project work, I used five modules and each module has own functions, such as:

1. System Module
2. User Module

3.3.1 Generate Result:

The results will be displayed are which type job class.

3.3.2 Preprocessing:

In this step data cleaning and data filling is done.

3.3.3 *Training:*

Use the pre-processed training dataset is used to train our machine learning algorithms.

3.3.4 Generate Accuracy

System generates accuracy for our model and dataset. This tells us how much efficiently model is working.

3.3.5 User Module

The user has to upload an image which needs to be classified.

Model building

User builds the models to fit our data for prediction of job class.

View Accuracy

Users view the generated accuracy from the system.

View Results

Users can view the generated classification from the user.

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4 Architecture

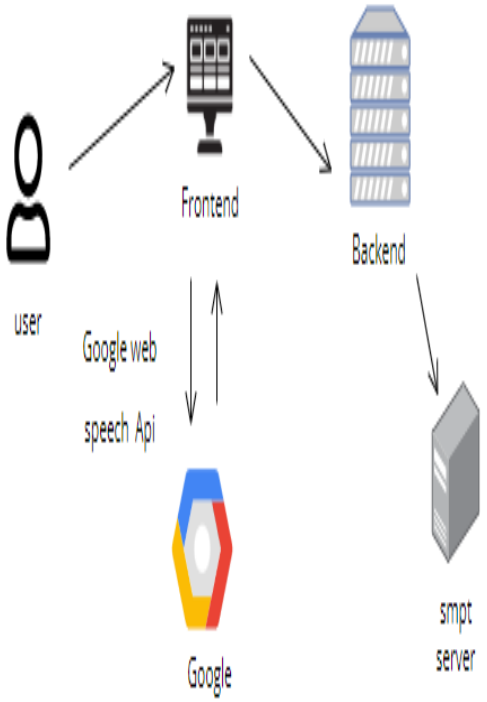
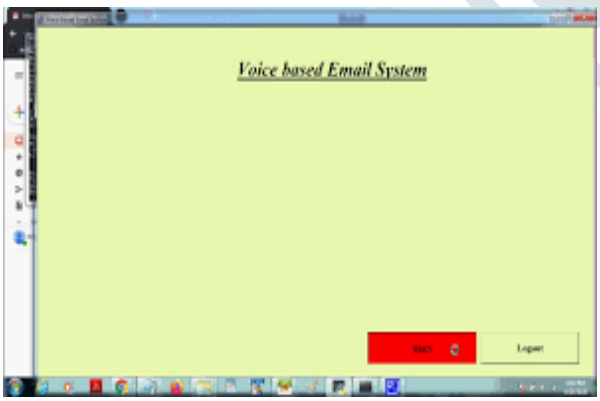


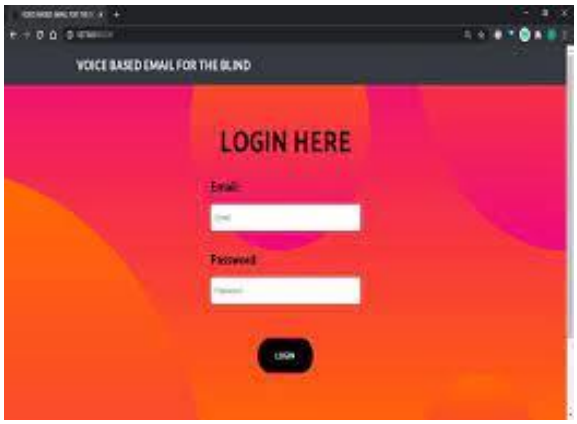
Fig 1: Frame work of proposed method

5.RESULTS SCREEN SHOTS

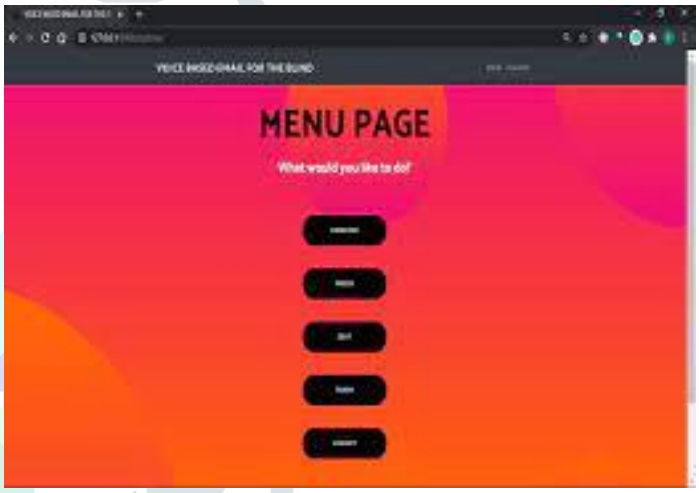
Home Page:



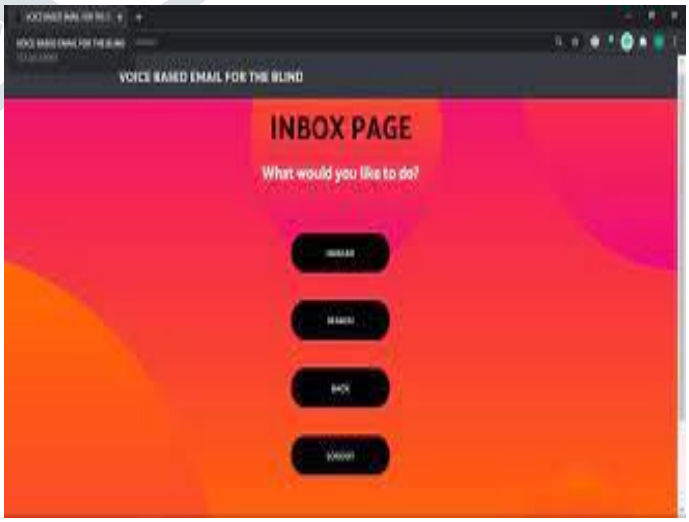
Upload image:

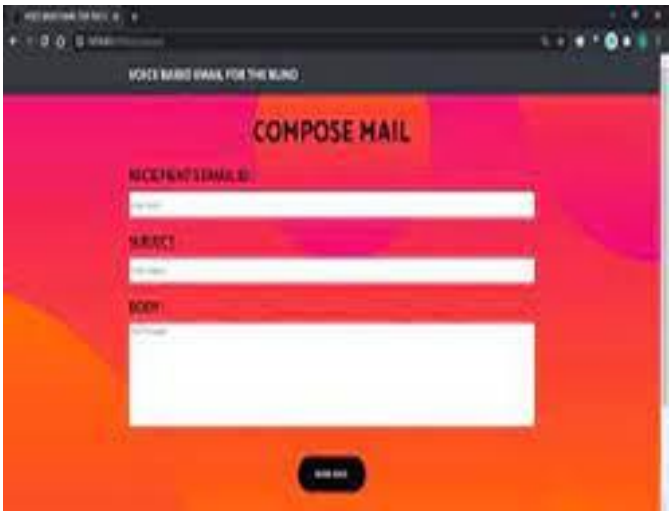


Choose options:



Predict Result:





7. CONCLUSION

✓ Anyone can use this email system with ease, regardless of their age group. It has a speech to content and speech to content with discourse reader as its highlights, allowing even those with external signs of disability to manage the planned framework. Now, visually challenged individuals can send and receive emails quite easily just by using voice commands instead of a keyboard or mouse. The problems that blind people once faced have been eliminated, and they are now more like other people. The concept of using screen readers with console shortcuts to lessen the cognitive load of remembering console shortcuts has been eliminated.Additionally, because keyboard usage is eliminated, any unsophisticated user who is unfamiliar with the layout of the keyboard need not bother. instructions provided by the IVR in accordance with the supplied services.

Future Enhancement

✓ This can be used in the future to readily define the sorts of different infections, making it easier to identify infections in their early stages and cure them.

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