

VOICE BASED E-MAIL FOR VISUALLY IMPAIRED PEOPLE USING ARTIFICIAL INTELLIGENCE WITH PYTHON

S. Lakshmi, Department of Computer Science & Engineering, Loyola Academy, Alwal
Viswanadham Bulusu, Department of Commerce and Management

J. Hari Prasada Rao, Department of Computer Science
Aurora's Degree & PG College, Chikkadpally, Hyderabad-Corresponding Author: harij@adc.edu.in

Abstract:

One of the most common form of communication among the people is email. Now a days lot of secret & Urgent information is shared through emails. So visually impaired people are not able to use computers on their own. These visually impaired people facing a problem of communication through email. This is true especially in case of social networking which these people cannot do without external help. Exceeding 1 billion people in world are living with loss of sight because they do not get the care they need for conditions like short and far sightedness, glaucoma and cataract, according to the first World report on vision given by the World Health Organization. Here we propose voice based email system using artificial intelligence with python where it helps to communicate much better for visually Impaired persons.

Key words: Visually impaired, voice based email, loss of sight, speech-to-text recognition, text-to-speech recognition.

INTRODUCTION:

As the term indicates, myopia involves an issue with sight which interferes with a student's academic pursuits. The Individuals with Disabilities Education Act (IDEA) formally determine the classification as "an loss of sight that, even with correction, adversely affects a child's educational performance. The term encompass both partial sight and blindness." Many conditions can cause loss of sight, and these disorders can take a number of forms. The National Dissemination Center for Children with Disabilities (NICHCY) gave a set of examples, inclusive of regular situation such as close by-sightedness and wide-sightedness, as well as most critical conditions like regular cataracts and strabismus. While the causes vary, there are several common signs which may specify that a child has a loss of sight. These include:

- Irregular eye motion (for instance, eyes that don't move together or that appear unfocused)
- Unexpected habits (such as covering one eye or frequently rubbing eyes)
- Sitting near to a television or holding a book near to the face

We use a computer to hear songs, read something accessing information from internet. But the blind people cannot read the information & cannot view the mouse cursor to give the command to the computer. They cannot access and send a mail. We are developing an information retrieval toolset for the blind and then transform information into a voice so that they can hear the message and access the mail easily without using the keyboard and visual thing.[2]

LITERATURE REVIEW:

The Research by the vision Loss expert group(VLEG) shows that world wide 253 million people are either blind or visually challenged that is around 253 million people are not aware of how to use the internet or email.[3] The existing email system do not provide this facility and are not accessible by blind people. There is no service providing to the blind people to send email. So it is a big drawback for the blind people to communicate through the internet. The blind people cannot read information and cannot view the mouse cursor to give command to the computer. Thus computer becomes difficult to use the things for blind people & information retrieval a tedious job.[2]

Audio based email are only preferable for visually impaired people. They can easily respond to audio

instructions. This system is very rare. So there is less chance to available this audio based email to the blind people.[1].

EXISTING SYSTEM:

E-mail systems are accessible by the users very easily in which only voice Recognition & text to speech systems are available. Visually impaired people cannot send the e-mails without the help of external guidance. Therefore the voice based e-mail system which is developing now completely different from existing system.

PROPOSED SYSTEM:

Visually Impaired people find it very difficult to utilize this technology . This is because in order to access the internet you would need to know what is written on the screen. If it is not visible then it's no use. We describe the voice based email system which can be used by a visually impaired people to access emails easily & effectively using Artificial intelligence with python. In the proposed system by using the python a user friendly interface will be developed which will be configured by the users voice initially and it responds according to the actions like when user speaks "**Open Gmail**" the Gmail app will be opened automatically.(using corresponding APK file).

SPEECH RECOGNITION:

Speech recognition is an integrative field of computer science which expand various procedures and technologies that allow the recognition and translation of oral communication into text by the system.

TEXT TO SPEECH:

Text-to-speech (TTS) is a type of adaptive technology that reads digital **text** aloud. It's sometimes called "read aloud" technology. With only single click of a button or single touch of a finger, TTS can take words on a computer or other digital device and convert them into audio.

WORD RECOGNITION:

Voice recognition software allows an individual to use their voice instead of typing on a keyboard. Voice recognition may be used to dictate text into computer . Voice recognition software allows for a quick method of writing into a computer. It is also useful for people with disabilities who find it difficult to use the keyboard. Word recognition is accessed with words presented in isolation format such as flash cards. The capability of a reader to acknowledge written words correctly and virtually effortlessly.

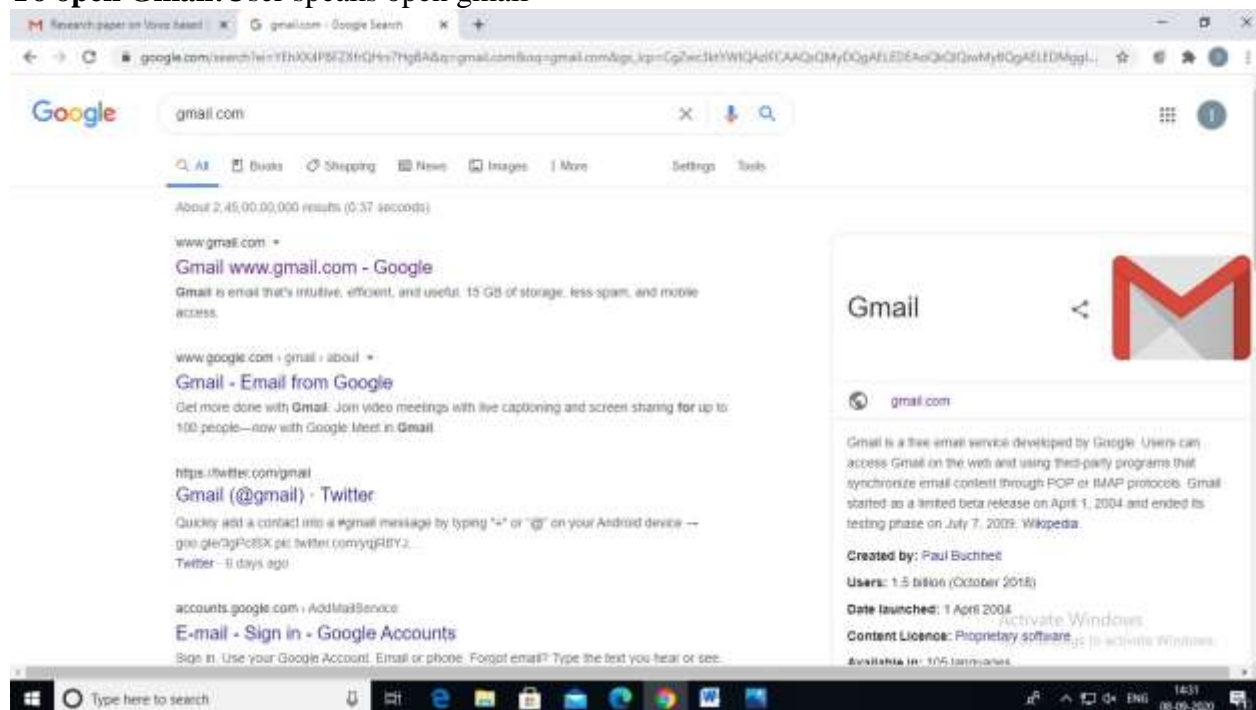
CODE FOR SPEECH RECOGNITION USING AI WITH PYTHON:

```
import speech_recognition as ar
import webbrowser
r=ar.Recognizer() with ar.Microphone() as source:
print("what you want") audio=r.listen(source)
print('opening' +r.recognize_google(audio)) webbrowser.open(p)
```

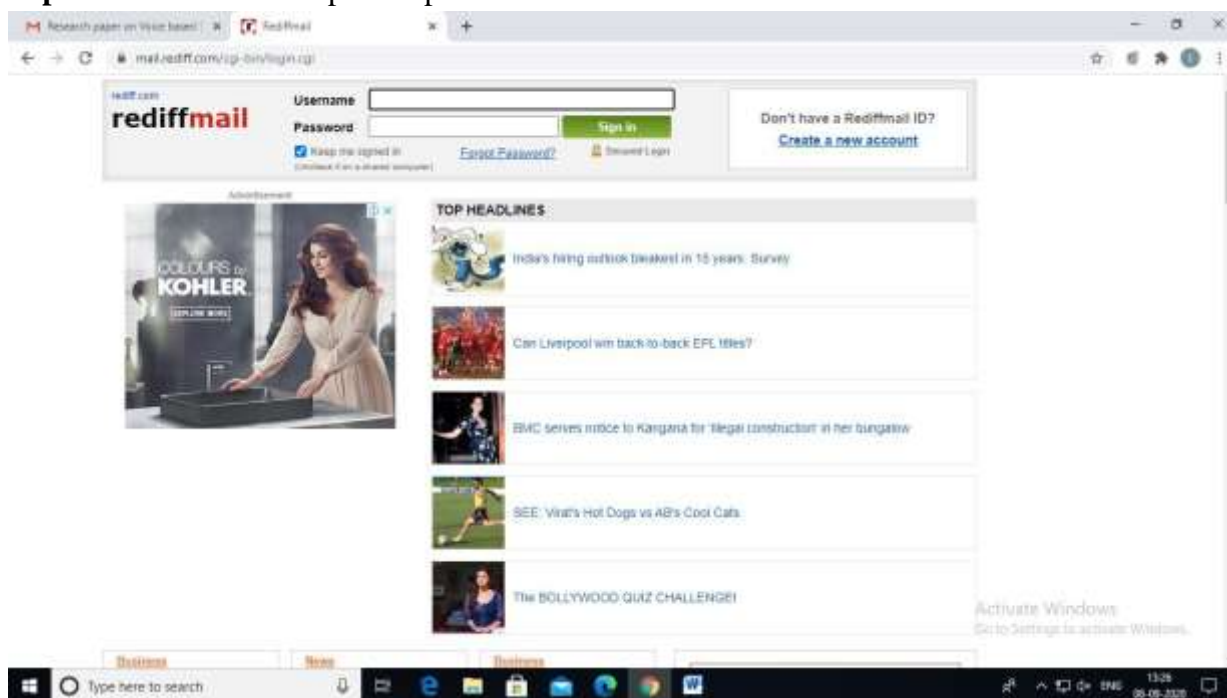
CODE FOR TEXT TO SPEECH USING AI WITH PYTHON:

```
import pyttsx3
kk=raw_input("enter the text") engine=pyttsx3.init() engine.say(kk)
engine.runandwait()
```

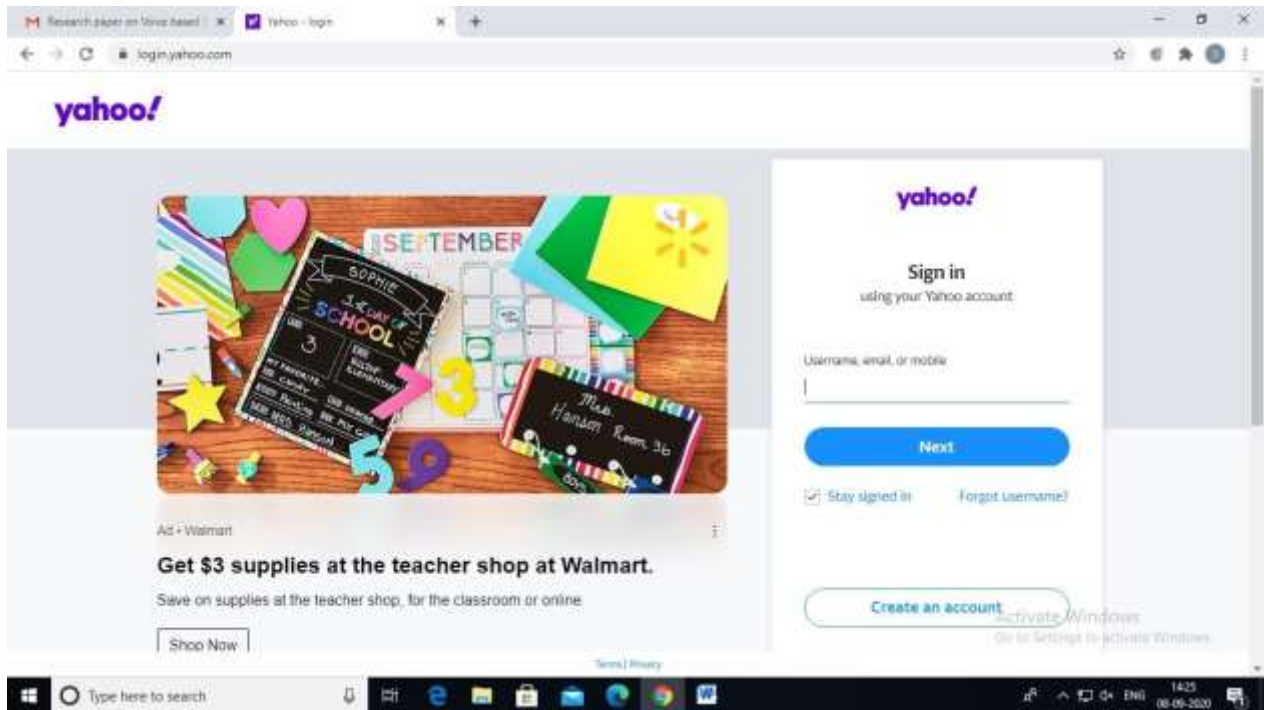
1. To open Gmail: User speaks open gmail



2. To open rediffmail: User speaks open rediffmail



3. To open yahoo mail: User speaks open yahoo mail



CONCLUSION

This paper proposes voice based email for blind designed specifically for visually impaired persons. It provides a voice based mailing services where they could read and send email on their own without any guidance. This **e-mail** system can be utilized by any user of any age grouping with ease of access. It is having a feature of speech to text as well as text to speech with speech reader which makes designed system to be operated by visually impaired person.

REFERENCES:

1. International Journal of Advance research, Ideas & Innovations in Technology www.ijariit.com .
2. Voice based e-Mail for blind Print ISSN No: 2395-1990, Online ISSN No: 2394-4099
3. http://www.juniper.net/documentation_US/junos/topics/concept/ipsec-authenticationsolution.html.