iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 8 **Issue:** XI **Month of publication:** November 2020

DOI: https://doi.org/10.22214/ijraset.2020.32285

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 8 Issue XI Nov 2020- Available at www.ijraset.com

Voice based E-Mail System for Visually Challenged People

Payal Vispute[1], Sneha Chaudhari[2], Jagruti Nikam[3], Asst. Prof. Ashish Awate[4]
[1, 2, 3, 4]*Department of Computer Engineering, Shri Vile Parle Kelavani Mandal's,Institute of Technology, Dhule, India*

Abstract: Due to its clarity and availability, Internet is broadly utilized in practically all the communication applications. In the recent times, number of utilization dependent on web have been created to make the communication as a more reliable and proficient in nature. Out of this various applications, E-mail is the most broadly utilized and dependable approach to speak with one another. The usage of e-mail is quiet easy and clear for ordinary clients yet with regards to the client with visual deformity, the framework is yet exceptionally hard to utilize. Still the current emailing framework is yet not updated for the utilization of visually impaired. This emerges a noteworthy need to redesign the current framework to make it more valuable for the visually impaired. Subsequently, in this study we present an email framework chipping away at the voice controlling rule for the individuals with visual disability to convey a basic and simple admittance to the email framework. This structure will also supportive for the people with different weaknesses alongside the visually impaired peoples.
Keywords : Speech recognition, Text to speech, Voice mail, visually challenged people, IVR .

I. INTRODUCTION

As the title recommends, the application will be web- based application for outwardly debilitated people utilizing IVR-Interactive voice response, subsequently empowering everybody to control their mail accounts utilizing their voice just and to have the option to read , send, and play out the wide range of various helpful assignments. The framework will incite the client with voice orders to play out certain activity and the client will react to the equivalent. The fundamental advantage of this framework is that the utilization of console is totally eliminated, the client should react through voice and mouse click as it were.

The innovations are developing quick step by step this has caused the way of life of individuals so natural as generally all work to should be possible in less measure of time with precision and effectiveness. Transmission is one of those fields that have developed to next level with the progression in innovation and the accessibility of Internet. Advances have made transmission so natural that separation has become an immaterial boundary in transmission. At the point when we consider transmission utilizing web, the main thing that we come in our mind is transmission through email. Email is one of the most authentic way for exchange of some significant data and also email is utilized around the world, however for getting to web an individual must have the option to see. There are a thousands individuals who are visually impaired who can't see the screen; consoles subsequently they can't get to the web . In this way, they are far away from email transmission and web world. These visually impaired individuals can't utilize the current email framework, they can't send, get messages and can't receive the data shared through email; consequently the current frameworks are not effectively available to them. To get to the web the individual must have the option to read what is composed on the screen thus, this makes web purposeless technology for visually impaired individuals. There is just a single route by which an visually impaired individual can send an E-mail is, they need to tell the whole content of the mail to a third individual with the goal that the third individual can form the mail and send on the behalf of the visually impaired individual. But this methodology doesn't take us to the solution of the issue. Each time finding a third individual isn't workable for an visually impaired individual and furthermore at times the content can be personal, for keeping up the Integrity of the Specifications. Therefore, for helping these individuals and creating society we have come up with this idea that helps a visually impaired individuals by providing ability to send and receive emails throw voice commands without using any keyboard and visual things.

A. Interactive Voice Response (IVR)

Interactive voice response (IVR) is an advancement that empowers a PC to connect with individuals utilizing voice and DTMF tones contribution through a keypad. In transmission interchanges, IVR empowers customers to interface with an association's host structure by methods for a telephone keypad or by discourse acknowledgment, after which organizations can be gotten some information about through the IVR trade. IVR systems can respond with pre-recorded or progressively created sound to furthermore manage clients on the most ideal approach to proceed. IVR systems sent in the organization are estimated to manage enormous call volumes and besides used for outbound calling, as IVR structures are cannier than various farsighted dialer structures.

©IJRASET: All Rights are Reserved

Another innovation which can be utilized is utilizing text to discourse to talk progressed and dynamic information, for example, emails, reports and news and information about climate. IVR utilized in automobile frameworks for simple activities as well. Text to Speech is framework started orchestrated discourse that is not the mechanical voice generally identified with PC. Unique voices produce the discourse in bits that are consolidated and adjusted prior to played to the guest.

B. Speech Recognition

Speech recognition (SR) is the arranged sub-field of computational linguistics (CL) that create procedures and headways to enable the affirmation and translation of imparted in language into text by PCs. It is also called as "automatic speech recognition "(ASR), "computer speech recognition ", or only "speech to text" (STT).

The structure separates the person's specific voice and use it to acknowledgment the affirmation of that person's discourse, for achieving extended precision. Systems that don't utilize getting ready are called as "speaker free" structures. Structures that use planning are named as "speaker subordinate". SR applications consolidate voice UIs, for instance, voice dialing, call steering, family unit device control, look (for instance find a web recording where explicit words were verbally communicated), essential data passage (for example Visa number), availability of coordinated reports for example a radiology report, talk to-content taking care of for example word processors or messages, and plane (customarily named Direct Voice Input). The term voice acknowledgment or speaker unmistakable verification insinuates distinguishing the speaker, rather than what they are stating.

II. LITERATURE SURVEY

After knowing some basics about our project. We surveyed and found some research paper that helps us to know about the existing system and getting awareness about that system. After studied those papers we decided that from which papers and what kind of data need to be collect and proceed. We can read it and collect the various types of concepts. Such as follows:

1) In Paper [1] A Review on Voice based E-Mail System for Blind, The Proposed machine will make the e-mail system very effortlessly available to visually challenged humans and also assist society. Authors proposed the device preserving one concept in thoughts that it must be effortlessly on hand for all form of persons.In this module, we present the detailed literature survey of the present comparable techniques. The present existing email frameworks are set-up of upheld applications give clients advantage of getting to and overseeing email by means of web offices. This makes email the mainstream type of correspondence. These current frameworks don't uphold any methods for attach material and language varieties, thusly these framework are of no utilization to the outwardly debilitated individuals or not at all helpful and can't stand up with technology. Also the existing system doesn't that much easier with impaired people. As they can't picture things which are available on the work area screen. So they experience challenges while performing different tasks. For an outwardly disabled individual taking care of a PC who has never utilized it, becomes badly designed similarly typical client even. So as to beat this difficulty there are many screen per users are given to client.

2) In Paper [2] , Voice based E-mail system , This project will completely eliminate the use of keyboards and we would be allow to enter the object only by using our voice and mouse click, IVR (Interactive voice response). The proposed System is opportunity of current system which has extra capabilities along with voice to text and text to voice conversation. This device is beneficial for visually impaired humans.

3) In Paper [3] Voice Based E-Mail System using Artificial Intelligence , the pc is going to be prompting the user to perform specific operations to avail various services and if the user has to access the various services then he/she has to perform that operation. Register in application system through the registration form. After successfully registering, the user can log in by speaking the Username and Password. Users can access various sections like Compose, Inbox, and Sent Mail after successful login.

4) In Paper [4] Voice Based Email for Blind People , Author describes the voicemail machine architecture that can be utilized by a blind person to access e-mails effortlessly and efficaciously. The contribution made via this research has enabled the blind human beings to send and obtain voice-based totally definitely email messages of their nearby language with the help of a Pc. Our proposed machine GUI has been evaluated against the GUI of a traditional mail server. We located that our proposed structure plays a lot better than that of the prevailing GUIS.

5) In Paper [5] Voice based e- mail System for Blinds , In this system particularly 3 kinds of technologies are used namely : STT(Speech-to-text), : here anything we speak is transformed to textual content. Their will a small icon of mic whose clicking the consumer had to talk and his/her speech might be converted to textual content layout, which the naked people would possibly see and look at moreover.

©IJRASET: All Rights are Reserved

6) In Paper [6] Voice based E-mail for the visually impaired, the author describes the advanced application which helps the blind and handicapped people to access mails easily and efficaciously. It affords a voice based mailing service in which the visually impaired individual should read and ship mail by using their own without the help of others. It calls for simple information about keyboard shortcuts. System has removed these types of standards and overcome all problems faced by the visually impaired. It makes use of a speech reputation utility which affords an green voice input approach for mailing gadgets for blind. It is likewise beneficial for handicapped and illiterate human beings.

7) In Paper [7] Voice Based Search Engine And Web Page Reader , Those who temporarily cannot use a traditional web browser, as their eyes or hands are involved or on that are not closer to their system are at any toubles. One of the most popular seek engine "Google", has brought speech recognition in search engine, but it does not support web page reader. In this system receives voice through microphone as input. In this the proposed system, new search engine enabled with voice recognition and voice synthesis mechanism is proposed .

8) In Paper [8] A Review on Voice based E-Mail system for Blind, Email system working on the voice controlling principle for the people with visual impairment to deliver a simple and easy access to the email system. The main advantage of this system is that the use of keyboard is completely eliminated; the user will have to respond through voice only. This framework makes the disabled individual feel like a normal people. They can hear the as of late got sends to the Inbox.

9) In Paper [9] Voice –Based E-Mail (V-Mail) for blind, The dictated mode is enacted and functions are created when the client advises the number separate to the orders like send form and read. At the point when the number comparing to "send" is said the mail is sent and at the point when number comparing to "read" is said the mail is peruse.

III. PROPOSED SYSTEM

In the proposed system, We are decide to proposed a Voice based Email system that will make email system very easily accessible to visually challenged people and also help society. This idea that helps a visually challenged people by providing ability to send and receive mails through voice commands without using any keyboard. There is big challenged of security related to authentication. So for confirmation the voice of client is the fundamental key for check. The proposed system is based on a totally novel concept and is nowhere like the previous E-mail systems. The most important factor that has been kept in mind while developing the proposed system's accessibility. A web system is said to be perfectly accessible only if it may be used effectively via all types of people whether able or disable. The modern-day systems do not provide this accessibility. Thus the device we are growing to be is absolutely specific from the current system. Unlike current system which emphasizes greater on user friendliness of regular customers, our system mainly focuses on consumer friendliness of all types of people along with everyday people visually impaired humans as well as illiterate people. This system also Add Attachments like media, Files Etc.

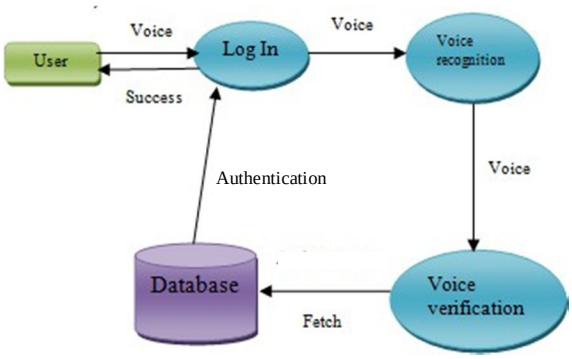


Fig. 3.1 Implementation Process

The main benefit of this system is that the use of keyboard is completely disposed; the client should react through voice and mouse click as it were. When viewing a list of conversations on your Inbox or, you can open a particular mail to read its messages. A mail is opened and read in step with the consumer's convenience and more often than not precedence is given to the unread mails. When a user chooses a mail by using telling the range of the mail it opens and the textual content in it's miles transformed into voice and the mail is read. All those activities take place without the use of keyboard. The exploration based examination and analyses presume that it is conceivable to add more highlights to the mailing framework.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 8 Issue XI Nov 2020- Available at www.ijraset.com

IV. PLANNING

Reading of messages is done perfectly with 100% accuracy. This is done with the help of a Text-to speech converter. For composing of Emails, we have given a recorder to record messages. The accuracy of speech-to-text is low as there is a need to train it. With the help of the recorder, users can directly attach the audio files. Thus, we have created a desktop application that makes checking mails and composing mails easier for the visually impaired with the help of Speech-to-text and Text-to-speech converters. We overcame the limitation of creating a user based mailing system by building the web application. This will not only ensure user's data security but also give users a sense of secure mailing.

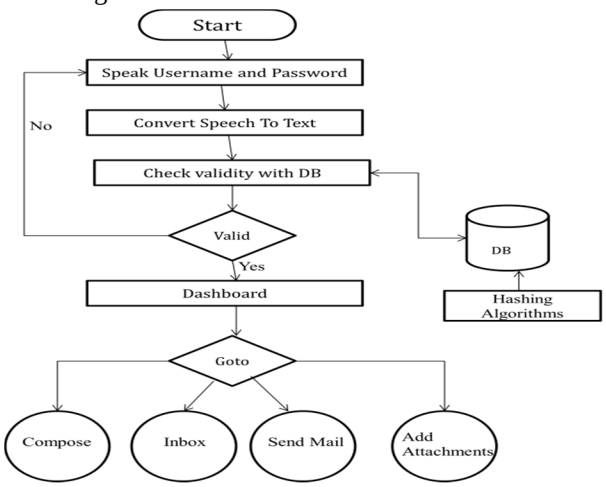


Fig 4.1 Flow diagram for Login and Dashboard

V. IMPLIMENTATION

By the above diagram of our Idea. At the point when client will visit our webpage he would initially need to enlist in our site through enrollment form. Client will be very much guided with the assistance of voice orders, while registration all the essential fields to be filled will be perused by site, by tapping on that create he would need to fill in them. For eg. On the off chance that cursor moves over register symbol it would sound "register button", in the wake of tapping on register button it would seem like "you are on enrollment page". While topping off the fundamental fields, discourse would be recorded in information base. Frequently utilized words will be available i.e., when client would talk it would get composed consequently. Additionally the voice would be recorded in the database. Since after enrollment, client needs to go to login page and type username and password which would get perceived through database empowering the right client to gain admittance to his/her record.

After effectively login the client would perform operations that the user wishes to perform, as per diagram there are five types of functions, we will provide. In these there are two new features we are going to create and implement i.e. Add attachments and delete mails. We will also provide the various types of languages that will user friendly for the user. The user is directed to this page once login is achieved correctly. From this page now the person can carry out operations that the consumer wishes to perform. The options available are: **Compose** - Here, the STT generation gets used, means speech gets transformed to textual content. Compose mail ask for the recipients mail id and subject also ask if user wants to attach the file or some folder.

1) *Inbox:* This option enables the person view all the mails that has been received to his/her account. The consumer can listen to mails
2) *Send Mails:* No typed input will be required. client can legitimately record message that should be propagated and can send it. This choice will maintain a tune of all mails dispatched by means of the person desires to get right of entry to those mails, this feature will offer them with their desires. In order to access the sent mails person will want to perform the actions provided by using the activate to navigate between mails. When the manipulate lands on specific mail consumer might be precipitated as who the receiver became and what is the challenge of the mail. This will assist the user in efficaciously information and extracting the desired mail.
3) *Delete Mails:* In this section, if user wants to delete some message from the inbox then by the voice commands he could delete those messages.
4) *Add Attachments:* For the further technologies of the application , the attachments like photos, phrase documents, audio and video documents may be included.

©IJRASET: All Rights are Reserved

VI. CONCLUSION

In this project, we have proposed a Voice based email system which we will be introduced as web-based application. This venture makes outwardly moved individuals capable enough to be important for developing digital India by permitting them to impart through web and furthermore making life of individuals a lot simpler. This framework overcomes many drawbacks that were looked by outwardly tested individuals, for example, sending, receiving mails and adding attachments. This design will likewise decrease psychological load taken by blinds to recall and type characters utilizing console.

VII. AUTHORS AND AFFILIATIONS

A. Payal H. Vispute.
Final Year Student of Computer Engineering at Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule, Maharashtra , India.

B. Sneha R. Chaudhari.
Final Year Student of Computer Engineering at Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule, Maharashtra , India.

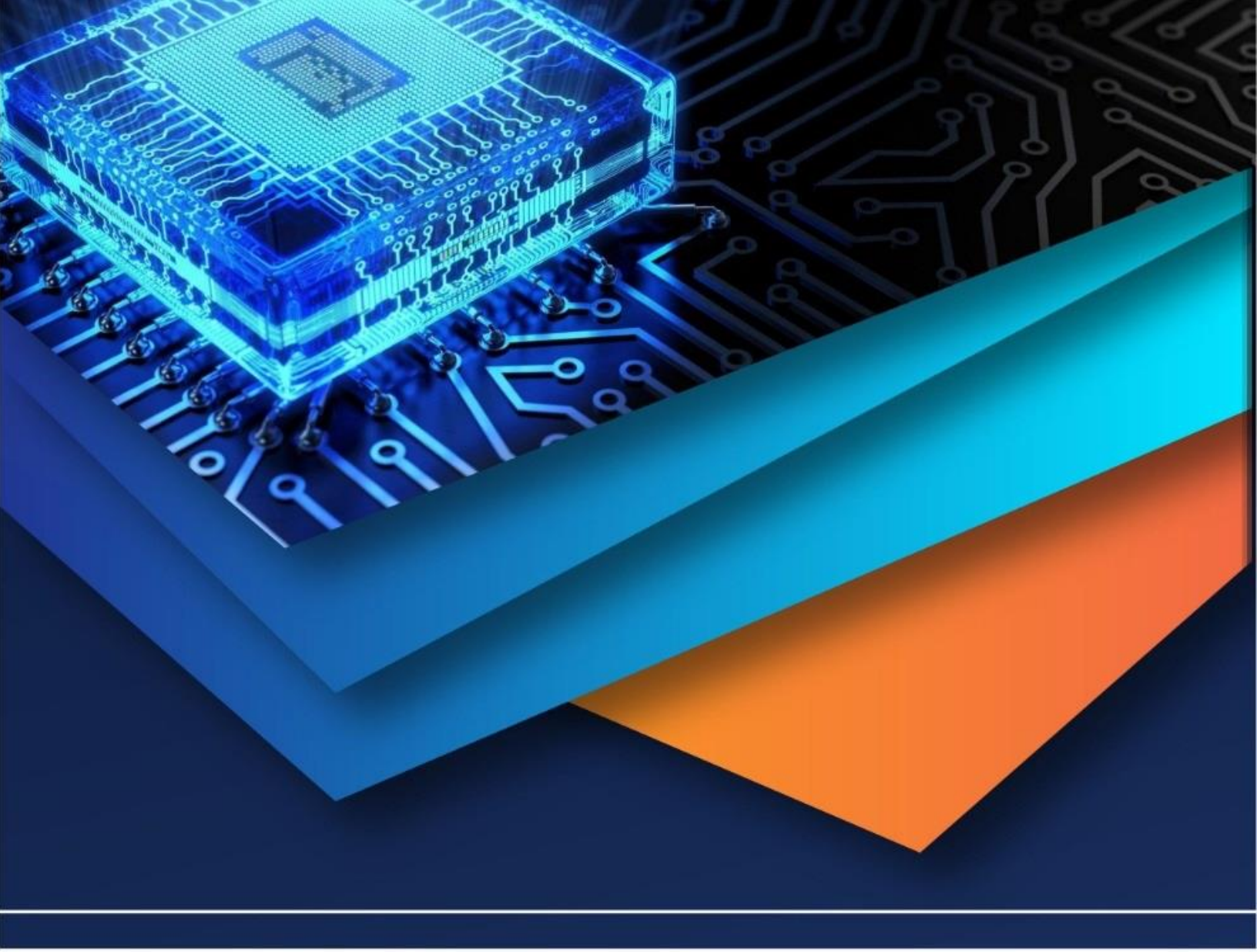
C. Jagruti P. Nikam.
Final Year Student of Computer Engineering at Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule, Maharashtra , India.

D. Ass. Prof. Ashish Awate
Currently working as Assistant Professor in Department of Computer Engineering at Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule, Maharashtra , India

REFERANCES

[1] Rijwan Khan, Pawan Kumar Sharma, Sumit Raj, Sushil Kr. Verma , Sparsh Katiyar , "A Review on Voice based E-Mail System for Blind",(IJEAT), February 2020.
[2] Pankaj Kumar Maurya , Prince Kumar , Mukesh Kumar, Pramod Nath , "Voice based E-mail system", (IRJET), Volume: 05 Issue: 04, Apr-2018 .
[3] Runze Chen, Zhanhong Tian, Hailun Liu, Fang Zhao, Shuai Zhang, Haobo Liu "Construction of a Voice Driven Life Assistant System for Visually Impaired People", International Conference on Artificial Intelligence and Big Data-" IEEE, 2018, PP 87-92, ISSN 5386-6987.
[4] K. Jayachandran , P. Anbumani, "Voice Based Email for Blind People" , ISSN: 2454-132X Impact factor: 4.295 (Volume3, Issue3), 2017.
[5] Pranjal Ingle1 , Harshada Kanade, Arti Lanke, "Voice based e- mail System for Blinds" , Volume 3, Issue 1, PP 25-30 ISSN 2349- 4840 ,2016.
[6] Aishwarya Belekar, Shivani Sunka, Neha Bhawar, Sudhir Bagade, "Voice based E-mail for the visually impaired", International Journal of Computer Applications (0975 – 8887) Volume 175– No. 16, September 2020.
[7] Ummuhanysifa U, Nizar Banu P K, "Voice Based Search Engine And Web Page Reader", International Journal of Computational Engineering Research (IJCER) , May 2013.
[8] Paulus A. Tiwari, Pratiksha Zodawan, Harsha P. Nimkar, Trishna Rotke, Priya G. Wanjari, Umesh Samarth, "A Review on Voice based E-Mail System for Blind", IEEE, 2020.
[9] Hari Priya S L, Karthigasree S, Revathi K, "Voice – Based E-Mail (V-Mail) for blind", IJSRSET, Volume 1,Issue 2, 2015.

©IJRASET: All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)