

# **ITE2010**

## **ARTIFICIAL INTELLIGENCE**

### **Online Debate System with Voice Recognition**



**Submitted By**  
**SHREYA DEEP ANAND - 16BIT0081**

# **ABSTRACT**

The proposed method deals with aiding the debating system with the help of the technological advancements. It is centered on an online debating system with the added feature of voice recognition of the already registered users on the server.

Voice recognition is commonly used in the automotive industry for various manufacturing and inspection applications. It is also used in warehousing and distribution to track material movement in real time, in the transportation industry for receiving and transporting shipments, in laboratory work, and in inspection and quality control applications across all industries.

Voice recognition technology converts human speech into electrical signals and transforms these signals into coding patterns with assigned meanings. It is also the only technology that is generally trained to the way a human works rather than requiring the human to learn the machine's way of doing things. And because speaking doesn't require the use of hands it is ideal for jobs requiring the worker's hands to be free. Inspection and baggage handling are two common applications. Voice terminals shine as automated input devices in applications where an operator's hands and eyes are occupied, enabling source data capture in real time.

Workers typically wear a microphone/speaker headset connected to a unit that recognizes spoken words and converts them into analog electrical signals. The analog signals are converted to digital patterns, which are decoded or "recognized" by template-matching or feature analysis. The data output may be entered into a program or it may activate a range of computer-based equipment such as scales, programmable logic controllers, or printers. In dialog voice recognition systems, the unit recognizes human speech and then synthesizes a spoken response (or plays back a digitized

response) to verify input and/or prompt the operator through a series of tasks.

Most voice systems are speaker-dependent, trained to recognize an individual voice that has previously read a vocabulary into the system. Speaker-trained systems recognize accents, dialects, and work-specific vocabulary, and offer the highest accuracy rates (under ideal conditions, error rates equal about 1%). Speaker-dependent systems rely on the operator to train the system in the words it is to recognize. This training makes the system less sensitive to external noises and other voices. It also allows non-English speaking employees to recite the list of words in his or her native language and have those words recognized for their English equivalents.

## **OBJECTIVE**

The main objective of this proposed project is to aid the current debating scenario and make it more feasible for the inaccessible and to automate the manual debate system.

It aims at increasing the citizen participation rate by providing flexible access to participate whenever and wherever convenient. Considering the fact that online forums are available for twenty-four hours a day, and from anywhere, as long as the user has access to an internet connection. An online discussion forum also democratizes community voices bringing the new opinions and options to light, that hadn't been considered or thought of, yet. This would help the reserved people who usually do not speak up in person. This feature would enable them to bring forth their ideas on an international platform, without much hesitation. Also, since an added feature of the software would be that the user is capable of keeping his or her identity anonymous, if it is preferred that way.

## **METHODOLOGY**

Online Debate system is a major platform to show our capabilities. More and more college students will be interested to avail them through these opportunities. Users will be made aware of new upcoming topics. They will get to share their opinion over an online portal. In future it can be used to conduct inter-country Meetings regarding important topics using a secret portal inside the website. Also unanswered questions can be answered by taking everybody's opinion into consideration. People with disabilities can also adopt speech recognition system. Online discussions are documented verbatim for future use and analysis. Differing from an unrecorded verbal conversation, an online discussion is always backed up and thus can be revisited and reinterpreted in the future. This could be done with the different analysis

Techniques, using analytical packages like NVivo. This would also let the user or participant to make a free choice with respect to the quality and quality of his participation in the debate.

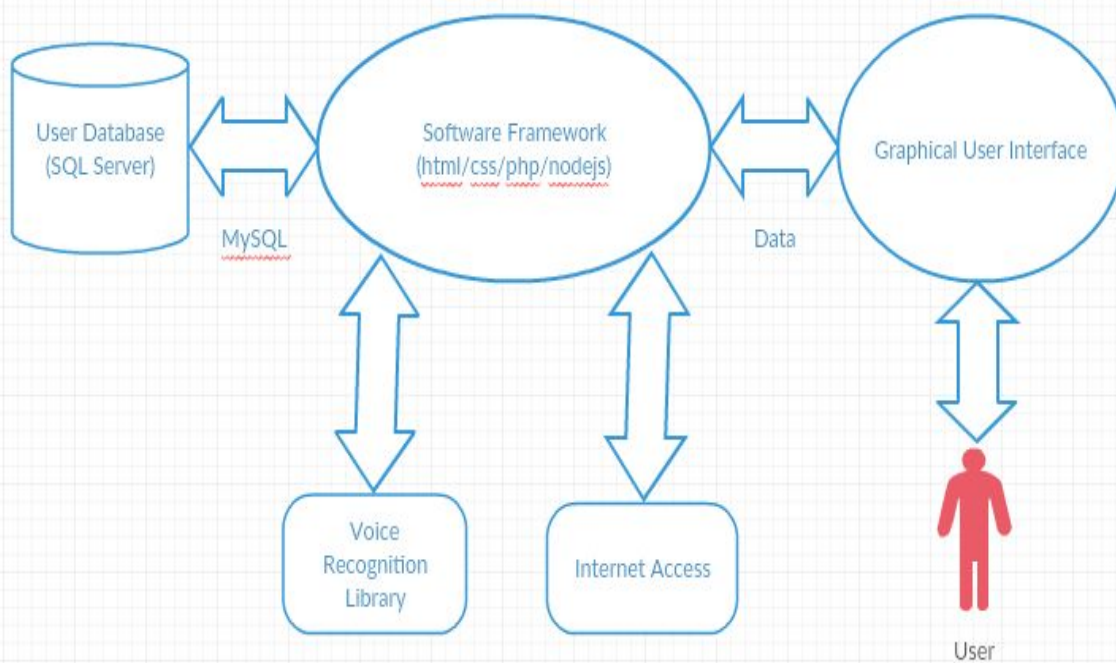
In our proposed software, we are making available the feature of debates on different topics to be going on simultaneously on the server. Each topic would already be having an ongoing debate, which can be joined by other users as per the request they make with regards to the topic of discussion. So basically, after a user has logged in into his account, using the voice recognition feature for verification, he can choose the type of debate he would like to let himself indulge into. With the help of just one click, he would be able to join the debate and keep himself entertained for as long as he desires.

Sometimes, these online discussions also help the emergence of an online community over time. These communities can be formed by people having the same views and political ideologies to change the world and deal with the current issues around the world. These communities can further stimulate the process of harmony and unity among the nations, and their nationals.

Also, areas where the right amount of infrastructure is not available for the purpose of creating the atmosphere and

ambience of a quality, undisturbed debate to take place, this proposed methodology would help in the growth of the debating scenario. The proposed work methodology includes the designing of both, the front end and the back end of the website. For front end, we will be using CSS or Php. For back end designing, we have decided to make use of Html coding. The expected outcome of the proposed work is not only seen as a benefit for the users of the system, but also the designers. The originality of our work rests with the voice recognition technology employed for registering users. Also, we as college students have gotten the opportunity to learn to design software, which is surely a very important stepping stone for us to be successful engineers.

## Algorithms of the proposed work



## **Algorithms of the proposed work**

```
START
Enter URL
L1:Enter Login Credentials
If(User_Verified=TRUE)
    {
        If(Want_to_debate=TRUE)
            {
                Enter Topic;
                Start Debate;
                If(Want_to_Exit=TRUE)
                    Exit();
                Else()
                    Continue_Debate;
            }
        Exit();
    }
Else()
    Display(Invalid Credentials);
    GoTo L1;
Exit();
END
```

## **Description of the proposed work**

In voice recognition we will be using Google cloud speech API. It enables developers to convert audio to text by applying powerful neural Network models in an easy to use API. Although the idea of implementing voice recognition is not new to the world of technology, but our project has a new edge to it in the fact that never before, has this technology been used for online debates. The meeting of these two fields is what we have proposed in our work.

The basic working of our system would be that, it would compare two samples of data and verifies the match. The two data being one that has been registered by the user already, at the time of joining the website, and the other being the current

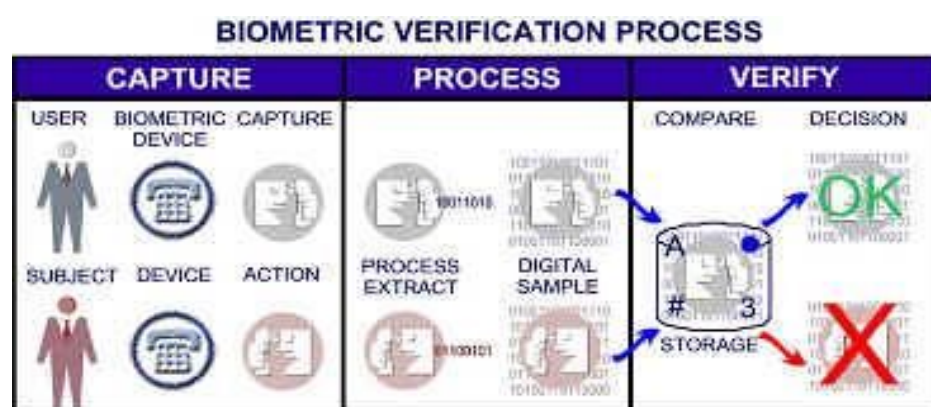
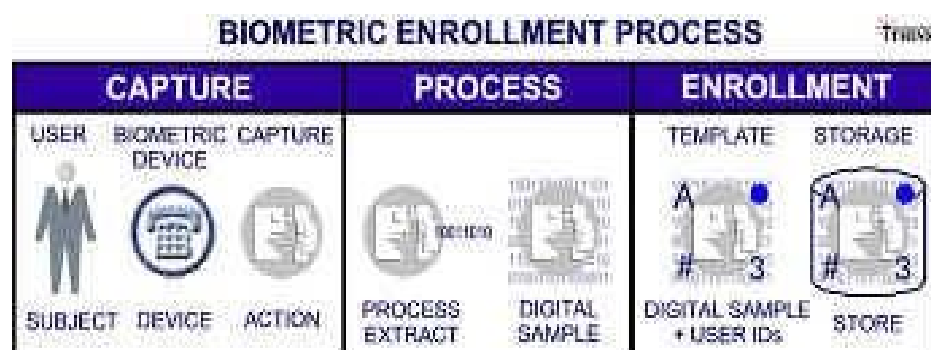
data, that we use for login purpose. The basic difference in recognition and verification is that, in voice recognition, the system identifies what the user is saying. Whereas, in voice verification, the system verifies the user's identity, also called the login credentials with respect to the user.

Firstly, a voiceprint of the corresponding data/voice is created. It basically means the digitizing a person's speech. For the same, this data is captured in a digital platform and plotted on a spectrum.

Verification process: The voiceprint thus created, is thereafter stored as a table of numbers. The table consists of a dominant frequency corresponding to each segment as a binary number, which is the language that the machine understands. Considering the fact that all the inputs in the table would either be a 1, or a 0, each column can be read bottom to top as a long binary code. This process is made clearer with the help of the given diagram.

Benefits of using a Voice Recognition System:

- It adds another layer of security for computer systems, which is highly required in this era of unending misuse of power.
- It produces a more cost effective and efficient environment.
- It would also save costs in the fact that everything is digitized; no money is spent on any kind of paperwork or whatsoever.



## **Overview organization of the proposed work (Context Diagram)**

Debates that take place through these media has limitations needs to understand and the situations that the speakers and audiences are in. It should be in a proper format:

- Should be no more than an hour to facilitate audience engagement.
- Should not utilize cross-examination in some of the formats (streaming video, sequenced debates, etc.).
- Should utilize points of information only in some situations such as virtual reality.
- Policy debate may become difficult because of the speed of delivery due to network problem. LIVE OR SEQUENCED Live debates: a debate happens all at once
- Plus: immediate, dynamic, save for on-demand viewing.
- Minus: time zones, technical glitches, full attendance required, hard to gather an audience, coordination. Sequenced debates: one speech at a time, period of days or weeks
- Plus: easy to arrange and implement, speeches can be redone, technical challenges less of a problem.
  - Minus: not so dynamic, must be edited for people to watch, problem of follow through.
- Regular contest judging: decision, critique.
- Audience judging: email, online poll
- Written ballot later. AUDIENCE
- No audience, just for the participants
- Live audience on site
- Live audience remote
- On-demand viewing audience



# PLATFORM

- HTML
- CSS
- JavaScript
- Bootstrap
- Python
- Anaconda
- NLP

# TEST CASES

## FAVOUR-

1. **Increases Deposit Base & Savings:** Currency demonetization increased deposit base and savings as individuals deposited more and stored less physical currency at home.
2. **Improves Monetary Transmission & Reduces Lending Rates:** With currency demonetization, there was a movement of currency from individuals to banks and Financial Institutions. The rise in deposit rates initiated all of this money into circulation.
3. **GDP Growth Potential:** More than short term benefits, there is an angle of long term GDP growth as well, which we should be able to observe over the next few years. This move could positively impact the GDP figures of our economy by around 2018.
4. **Long Term Benefits:** A few might criticize this move at present, but it will bring multiple long-term benefits for the nation's economic health. This entire exercise might be slightly discomforting, but demonetization will definitely have long-term benefits and implications.

## AGAINST-

1. Despite of all developments, the majority of population in India still do not use Credit/Debit or ATM cards for fulfilling their requirements. So, soon after the declaration of Demonetisation on 8th of November, the normal lifestyle of people got badly disturbed.
2. Utmost affected were the people who went out on a trip to some place. There the charges incurred on transportation, hotel bill, purchase and the like could not be met immediately and hence everything came to a halt.
3. People placed a very hard time in medical treatment & other medical-related issues. For instance, in some cases their consultancy with the doctor was refused due to lack of money to pay the fees. In general, hospitals refused to accept the old currency and people had no other options left to make the payment. So, planned medical treatments

stopped & in certain cases, the hospitals even refused to return back the dead bodies to their relatives on account of payment issues. This resulted in great dissatisfaction & revolt in the minds of the people.



## **CONCLUSION**

We would be able to successfully make the online debate system with voice recognition system which has very high Security. This system can be used in various institutions to provide more secure platform to students for debate.