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## **E-LEARNING PORTAL FOR HEARING IMPAIRED STUDENTS**

### **ABSTRACT**

Technology can support in imparting knowledge to hearing-impaired students by means of visual interpretation of the contents and be supportive to the teachers in reaching out to them more effectively. This Learning Portal applies Speech Recognition techniques for transcribing the teacher's classroom lecture into textual content for the students to view, understand and also save for future reference. Images and related videos can be uploaded for better understanding.

### **REQUIREMENTS:**

The initial requirements for the learning portal for work efficiently are as follows:

- A personal computer/laptop/smart board.
- Wired/wireless/in built microphone
- Internet facility

### **WORKING:**

Before the time of lecture, the teacher opts the required language to start his/her class. After choosing the required language, the teacher then, needs to upload the required image file and video file for the particular session. The image file can be uploaded in two ways. One is by clicking the upload image button, which redirects the system to the local directory where the image files are being stores. The second way is that the teacher can click the audio input button and can provide the name of the image through the microphone. This then displays the appropriate image file to the image block, which makes it even more user friendly. The video file can be uploaded by clicking on the upload video button which redirects the system to the local directory where the video files are being stores.

When the teacher wants to start the class, he/she would need to enable the start button, which converts the teacher's session contents into textual form and display it in the text area. For transcribing the audio content into textual form, SPEECH RECOGNITION techniques inside JQuery library are being used. When the teacher needs to stop or needed a break during the session, the teacher can use the pause button to pause the transcribing. The teacher in charge can also edit the transcribed text, in case there has been some error while transcribing the audio into textual content. The learning portal also has a download button, which downloads the teachers lecture during the completion of the session, for the use of both teachers and students in future purpose.

Topic based summary generation is proposed as the future enhancement for this system.

The learning portal will help both students and teachers in a hearing impaired school as this was particularly developed for it. This will be helpful towards overcoming the sign language barrier for those hearing impaired students.

## **USER INTERFACE:**

