# Speech Authentication System

**Project Team Members**

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**Project Summary**

A Speech authentication system that grants a user access to a system via speech recognition.

**Goals and Objectives**

- Using a Google speech API to convert speech-to-text and vice versa.
- Comparing the user input audio with the saved audio file.
- Allowing access to the user after the audio matched up to 90% accuracy.

**GPIO**

The GPIO board includes two switches, one to turn on the mic for recording audio and the other to turn off the mic to stop the recording, connected by jumper wires. The board will include a LED bulb that indicates when the mic is on. The USB microphone is connected to the Raspberry Pi.

**GUI**

The GUI will include a meter that highlights the intensity of the audio, a save button to save the recorded audio, a textbox that displays the user's speech in text format, a reset button to reset the saved audio and a play button that will play the saved audio back.

**Github Repository**

This project's Github repository is located at: https://github.com/Ujjen/Group-3.git

# Gantt Chart

| Speech Authentication System | Week 1 Nov 30- Dec 3 | Week 2 Dec 6-10 | Week 3 Dec 13-17 | Week 4 Dec 20-24 | Week 5 Jan 3-7 |
|---|---|---|---|---|---|
| Starting with the Project | ■ | ■ | | | |
| –Group formation | ■ | | | | |
| –Project ideas with feedback | | ■ | | | |
| Group Presentation | | | ■ | | |
| Building the Project | | | | ■ | ■ |
| – Coding the GUI and the main software | | | | ■ | ■ |
| – Assembling hardware | | | | | |
| Testing and Debugging | | | | | |
| In-class Project Days | | ■ (green) | ■ (green) | | |
| Final project presentation | | | | | |
| Christmas Break | | | | ■ (red) | |
| MLK day | | | | | |

| Week 6 Jan 10-14 | Week 7 Jan 17-21 | Week 8 Jan 24-28 | Week 9 Jan 31- Feb 3 | Week 10 Feb 6-10 |
|---|---|---|---|---|
| (Building the Project — blue) | ■ | ■ | | |
| (Coding the GUI and the main software — blue) | ■ | ■ | | |
| (Assembling hardware — blue) | | ■ | ■ | |
| (Testing and Debugging — blue) | | | ■ | ■ |
| (In-class Project Days — green) | | | | ■ (green) |
| (Final project presentation — yellow) | | | | ■ (yellow) |
| (MLK day — black) | ■ (black) | | | |