Review Copy

Project Title:
Speech Based Automated Note Taking System

Details of Team:
Team - 40
1. D. Keerthi- S180532
2. P. Kumari- S180192
3. Sk. Haseena Begum- S180720
4. J. Leela Satya Sri- S180543

Details of Mentor:
Mrs.Ch.Lakshmi Bala, M.Tech (Ph.D) (Head of the Department)

Answer the following questions

1. What is your Project Title?

Speech Based Automated Note Taking System

2. Why did you choose this Project?

To reduce the difficulty of manual note-taking with speech based automated note-making system and to write emails easily with speech as manually typing a document/email takes a lot of effort and time.

3. Which Platform?

Web Application

4. What was your role in the Project?

Role: Backend developer

5. What do you think is the future scope of the project?

Adding speech recognition technology to seamlessly convert spoken words into written text, and also used to write emails is the future scope of the project .
We can use this system in standing mics to capture the speech in live events, lectures or meetings.

6. Mention Most important references that helped you in executing the project?

Below are most important references that helped us in executing this project..
IEEE Papers
Github References

7. what is your group size? How did you divide the tasks?

Team size - 4
We divide the task into four modules.
1. Interface Design
2. Model Training
3. Backend Connection
4. NLP for Email Formatting

8. What strategy did you follow to integrate daily developments of your project?

Set clear goals of our project is the strategy we follow. we set our goals to complete the task and then integrate the developments of our project

9. Share some challenging tasks you faced while executing your project and what was your approach in solving them?

Collecting the large data set of audio files is challenging that we faced and we take the help of internet sources to collect the audio files and we found some in-built speech recognition libraries to recognize speech.

10. What are the methodologies used in your project?

Speech Recognition
Algorithms: Hidden Markov Model or Julius Decoder
Natural Language Processing

11. How you test your application?

Usability Testing: Conduct user testing with the target audience to evaluate the web app's ease of use, navigation, and overall user experience.
Performance Testing: Assess the web app's performance under different conditions, including varying voice modulation, frequencies and device specifications.

12. Compare the existing system and proposed system in your project (write the major differences)

The differences between existed system and the proposed system is the existed system can only transcribe the spoken words into text but the proposed system is Used to create the customized document preparation or organizing the notes by using transcribed speech to text and also for the writing the E-Mails

13. Limitations of your Project?

User should provide audio input to the system.
Input audio must be clear and less noise.

14. Can your project be commercialized?

Yes, we can give it to researchers and those who want to extend the implementations furtherly ,once it has developed.

15. How do you deal with your team members?

We clearly communicate with each other and I express my thoughts and views to them.
We recognise and utilize each member's strengths and skills effectively.
And I have taken feedback from them to improve myself.

16. How much time taken to complete your project: (days)?

We require 170 days to complete our project.

17. Who will benefit from your project?

The system is most useful for students to prepare documents and to write emails.

18. write at least Three comments of your team members
(ex: 3 comments* 3 members =9 comments)

1.Sk.Haseena Begum: Good involvement and understanding of the project. Positive attitude and hardworking peer. Played crucial in completing the project. Done her work properly and took part of other works too.

2.J.L.Satyasri:Good involvement in the project. Done her work.

3.P.Kumari: Good involvement in the project .Done her work.

19.What type of difficulties you face while implementing your project(yes - write)?

Achieving accurate output to input speech.
Collecting data/libraries to train model.
To learn new methodologies to design and create our model.

20. How many times contact your mentor for project development (date/meet link/ total no of meetings/ resolutions)

We met our project mentor nearly 15 times.

21. Your mentor is helpful? Justify

Yes, our mentor is helpful in each and every task in our project. She had given meaningful insights in our project to get better results

22. What you?

I have worked in designer role mainly. And shares remaining tasks also.

23. Conclusion of your Project

Manual note-taking can be difficult, especially while making documents, during meetings or lectures. It is a time consuming task for humans to make notes, prepare documents and writing the emails. To address this challenge, a Speech-Based Automated Note-Making System is proposed. The proposed system enables users to make notes using speech and it transcribes the input speech into equivalent text. This system has an user-friendly interface to make use of the system efficiently. We can also write emails and can edit text by adding editing features to the system. It can be useful for record meetings and generating meeting reports in future by making the necessary changes in the system.

24. How will you evaluate project success?

Word Error Rate (WER): This is the standard metric for measuring speech recognition accuracy. It calculates the percentage of incorrectly recognized words compared to the ground truth. Lower WER indicates better accuracy.

Phoneme Recognition Accuracy: This metric measures the accuracy of recognizing individual phonemes, which are the building blocks of spoken language. This can be useful for fine-tuning the HMM model

User Interface: The web application should be user-friendly and intuitive for recording speech and displaying the converted text.

Recording Quality: The audio recording should be clear and free from noise to ensure accurate speech recognition.