# Meeting Gen AI: Summarizing and Answering Questions

By: Raunak Balchandani (NUID: 002964444 and Varsha Hindupur (NUID: 002935078

This document provides a comprehensive overview of Meeting Gen AI, a groundbreaking project that leverages the power of generative AI, RAG, LLMs, and LangChain to create meeting summaries and answer questions based on meeting audio and transcripts. Explore the project's objectives, features, challenges, advantages, and future potential in this detailed guide.



## Project Introduction and Objectives

Meeting Gen AI is an innovative project designed to revolutionize the way we capture and analyze meeting information. This project aims to streamline the process of generating meeting summaries, extracting key takeaways, and providing quick answers to questions about meeting discussions. By leveraging advanced AI technologies, it aims to improve meeting efficiency, enhance knowledge retention, and facilitate better decision-making.



# Use Case: Meeting Gen AI

Meeting Gen AI utilizes a powerful combination of technologies to understand and process meeting data. Generative AI models are employed to automatically generate summaries that capture the essence of the meeting discussion. Retrieval Augmented Generation (RAG ensures that summaries are grounded in the specific context of the meeting transcript. Large Language Models (LLMs provide the intelligence to understand the nuances of human language and generate human-like summaries. LangChain, a framework for building language applications, orchestrates the entire process, enabling seamless integration of these technologies.

### Key Features and Functionalities

Meeting Gen AI boasts a range of key features designed to enhance the meeting experience:

- Automatic meeting summary generation
- Contextualized summary creation based on meeting transcripts
- Answering questions related to meeting content
- Interactive Q&A capabilities, allowing users to ask follow-up questions
- Integration with popular meeting platforms for seamless data access
- Customizable settings for tailored summaries and question-answering experiences

# Challenges and Solutions

Building Meeting Gen AI presented several challenges:

- 1. Accuracy and completeness of automatic summaries
- 2. Maintaining context and ensuring coherent answers to questions
- 3. Adapting to diverse meeting styles and speaker variations

To overcome these challenges, the project employed several solutions:

- 1. Fine-tuning generative AI models with extensive meeting data to improve accuracy.
- 2. Developing robust context-aware mechanisms to ensure accurate and relevant responses to questions.
- 3. Implementing advanced speech-to-text and natural language processing techniques to handle diverse meeting styles and speaker variations.



# Generating Meeting Summaries and Answering Questions

Meeting Gen AI works by first transcribing meeting audio into text. This transcript is then processed by the AI engine, which analyzes the content to identify key themes, points of discussion, and action items. This information is used to generate a concise and informative meeting summary that captures the essential elements of the meeting. Users can then ask questions about the meeting, and the system will use its understanding of the meeting content to provide accurate and contextualized answers.

# Advantages of Meeting Gen Al

Meeting Gen AI offers several significant advantages:

- Increased meeting efficiency by streamlining the summary generation process
- Enhanced knowledge retention through readily available summaries and Q&A capabilities
- Improved decision-making based on clear and concise meeting information
- Reduced time spent on manual note-taking and summary writing
- Enhanced accessibility to meeting information for all participants
- 1 Time Savings

Automating the summary generation process frees up valuable time for participants, allowing them to focus on more strategic tasks and discussions.

3 Enhanced Productivity

With quick and easy access to meeting insights, users can make informed decisions and take action promptly, leading to increased productivity.

2 Improved Communication

By providing accurate and readily accessible information, Meeting Gen AI promotes clearer communication and understanding among team members.

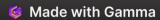
4 Improved Collaboration

Meeting Gen AI fosters better collaboration by providing a centralized source of information that is easily accessible to all team members.

### Potential Use Cases and Applications

Meeting Gen AI has the potential to revolutionize various industries and applications:

- Business Meetings: Generate summaries and answer questions for business meetings, facilitating effective decision-making and action planning.
- Education: Create summaries of lectures and provide answers to student questions, enhancing learning and knowledge retention.
- Legal Proceedings: Generate transcripts and summaries of legal proceedings, ensuring accurate documentation and facilitating legal research.
- Healthcare: Analyze medical consultations and provide answers to patient questions, improving communication and patient understanding.
- Government: Capture and analyze public hearings and debates, providing transparent documentation and facilitating informed decision-making.



### Conclusion and Future Scope

Meeting Gen AI represents a significant advancement in AI-powered meeting analysis. Its ability to generate summaries and answer questions based on meeting data holds tremendous potential for improving efficiency, knowledge retention, and decision-making across various sectors. As AI technology continues to evolve, the future scope of Meeting Gen AI is vast, including further improvements in accuracy, language understanding, and the integration of additional features like sentiment analysis and action item tracking. This project paves the way for a future where meetings are more productive, informative, and accessible than ever before.

