

AI – Minutes Meeting Generator

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Abstract – The AI Minutes Meeting Generator is an intelligent system designed to automatically record, analyze, and summarize meeting discussions into structured minutes. It leverages advanced Natural Language Processing (NLP) and Machine Learning (ML) models to identify key decisions, action items, participants, and deadlines from spoken or written meeting content. The system processes audio or text input, performs speech-to-text conversion, and extracts important insights using contextual understanding and semantic analysis. This approach ensures accuracy, reduces manual documentation effort, and enables organizations to maintain consistent and actionable meeting records. By integrating cloud-based storage and real-time collaboration features, the system enhances productivity, transparency, and decision tracking within teams and enterprises.

Keywords – AI Minutes Generator, Natural Language Processing (NLP), Speech-to-Text, Machine Learning (ML), Meeting Summarization, Action Item Extraction, Automated Documentation

1. INTRODUCTION

Traditional meeting documentation methods are manual, time-consuming, and prone to errors. The AI Minutes Meeting Generator uses Artificial Intelligence (AI) and Natural Language Processing (NLP) to automatically record, analyze, and summarize meetings in real time. This system enables fast, accurate, and automated generation of meeting minutes for enhanced productivity and organizational management.

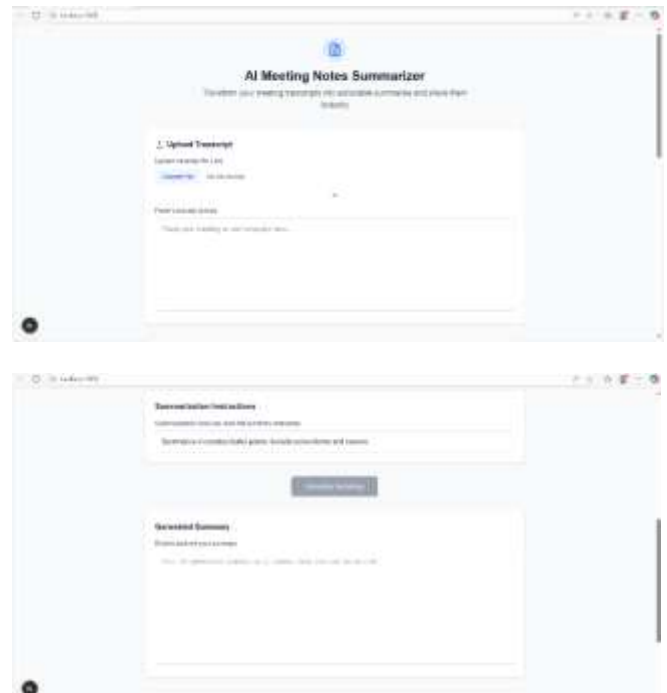
Body of Paper

In traditional meeting environments, documentation and summarization are manual, repetitive, and prone to oversight. These methods struggle with consistency and are vulnerable to human error, making them inefficient for maintaining accurate records of discussions and decisions. Incomplete notes, unclear task ownership, and scattered data further reduce reliability. As a result, conventional systems fail to provide the efficiency and precision required for modern collaboration and workflow tracking.

Our project introduces an AI Minutes Meeting Generator that automates documentation using advanced Natural Language Processing (NLP) and Machine Learning (ML) techniques. It processes live or recorded meetings, performs speech-to-text conversion, detects important segments, and extracts action items, decisions, and summaries using contextual analysis. By integrating intelligent algorithms and real-time processing, the system delivers fast, structured, and reliable outputs, making it

ideal for team collaboration and enterprise management.

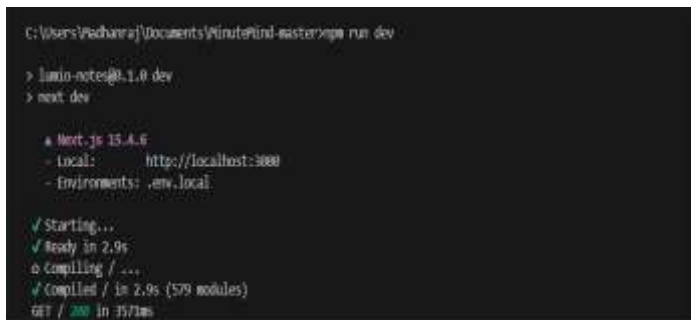
Fig -1: User Interface for Uploading Meeting Transcripts



Furthermore, our AI Minutes Meeting Generator enhances performance and scalability by integrating cloud-based storage for secure archiving of meeting summaries and transcripts. Only authorized users can access the data, ensuring privacy and compliance with organizational policies. This combination of real-time NLP processing, intelligent summarization, and decentralized storage offers a transparent, efficient, and secure solution for automated documentation, productivity improvement, and collaboration management.

Fig -2: Email Sharing Feature for Generated Meeting Summaries



Fig -3: Project Execution in Development Environment

```
C:\Users\Padhara\Documents\Minutes\master> npm run dev
> luma-notes@1.0 dev
> next dev

  ▲ Next.js 13.4.6
  - local:    http://localhost:3000
  - env:      .env.local

✓ Starting...
✓ Ready in 2.9s
○ Compiling / ...
✓ Compiled / in 2.9s (579 modules)
GET / 200 in 757ms
```

2. CONCLUSIONS

Our project enhances meeting productivity and documentation accuracy through the implementation of the AI Minutes Meeting Generator. Using advanced Natural Language Processing (NLP) and Machine Learning (ML) techniques, the system automatically summarizes meeting transcripts into clear, structured, and actionable minutes. By integrating intelligent algorithms, the system adapts to different meeting contexts, providing reliable outputs that improve collaboration, accountability, and decision tracking. This approach offers an efficient, scalable, and intelligent solution for automated meeting documentation in modern organizations.

ACKNOWLEDGEMENT

We would like to express our heartfelt gratitude to our project guide and faculty members for their continuous support, guidance, and encouragement throughout the development of this project. Their expertise and valuable feedback played a crucial role in shaping the direction and quality of this research. We are also thankful to our institution for providing the necessary infrastructure, technical resources, and a conducive environment for innovation and experimentation. Finally, we extend our sincere appreciation to our peers, friends, and family members for their constant motivation and support during every phase of this project.

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