



International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 10, October 2026)

AI Based Meeting Minutes Generator and Automatic Email Dispatcher

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Abstract—Meetings are an essential part of organizational communication and decision-making, but preparing meeting minutes manually is time-consuming and prone to errors. This paper proposes an *AI Based Meeting Minutes Generator and Automatic Email Dispatcher*, an intelligent system that automates post-meeting activities using Artificial Intelligence (AI), Natural Language Processing (NLP), and Large Language Models (LLMs). The proposed system generates structured meeting minutes from meeting transcripts by identifying key discussion points, action items, assigned members, and deadlines. The generated minutes are reviewed and approved by the manager before being automatically emailed to the respective employees. In addition, the system provides task tracking, employee progress updates, and reminder notifications until task completion. By integrating meeting summarization, task extraction, email automation, and workflow management into a unified platform, the proposed system improves communication, reduces manual effort, enhances accountability, and increases organizational productivity.

Index Terms—Artificial Intelligence, Meeting Minutes, Large Language Models, Natural Language Processing, Task Management, Email Automation, Workflow Automation

I. INTRODUCTION

Meetings play a crucial role in organizational communication, project planning, and decision-making by facilitating discussions, assigning responsibilities, and tracking project progress. However, preparing meeting minutes manually is a repetitive and time-consuming process that often leads to incomplete documentation, communication gaps, and delays in task execution. As organizations increasingly adopt virtual and hybrid work environments, there is a growing need for intelligent systems that can automate meeting documentation and efficiently manage post-meeting activities.

Recent advancements in Artificial Intelligence (AI), Natural Language Processing (NLP), Automatic Speech Recognition (ASR), and Large Language Models (LLMs) have significantly enhanced the ability of computers to understand human language and generate meaningful textual content. These technologies enable intelligent systems to transcribe meeting conversations, summarize discussions, identify important decisions, extract action items, and automate routine administrative tasks. Consequently, AI-powered meeting assistants have gained considerable attention for improving workplace productivity and reducing manual effort.

Several research studies have proposed AI-based solutions for meeting summarization, task management, workflow automation, and email processing. While these systems suc-

cessfully automate individual functionalities, most of them operate independently and do not provide a unified platform that integrates meeting minute generation, manager approval, automatic email communication, employee task monitoring, and reminder notifications. This fragmentation requires organizations to use multiple software tools to manage different stages of the meeting lifecycle.

To overcome these limitations, this paper proposes an *AI Based Meeting Minutes Generator and Automatic Email Dispatcher*. The proposed sys

II. LITERATURE SURVEY

Artificial Intelligence (AI) has significantly transformed meeting management by automating tasks such as speech transcription, meeting summarization, action item extraction, task management, and email communication. Recent advancements in Natural Language Processing (NLP), Automatic Speech Recognition (ASR), Machine Learning (ML), and Large Language Models (LLMs) have enabled organizations to improve the efficiency and accuracy of meeting documentation while reducing manual effort. These intelligent technologies assist in capturing key discussions, identifying responsibilities, and supporting decision-making, thereby enhancing collaboration in both virtual and hybrid work environments.

In recent years, researchers have proposed various AI-based approaches to address different aspects of meeting management. Existing studies focus on meeting summarization, workflow automation, intelligent task management, email processing, and reminder systems. While these solutions demonstrate significant improvements in automating individual tasks, most of them address only specific functionalities and do not provide a unified framework for complete post-meeting management. Consequently, organizations often rely on multiple independent tools to generate meeting minutes, assign tasks, communicate outcomes, and monitor task progress.

This literature survey critically reviews recent research related to AI-powered meeting summarization, meeting intelligence, workflow automation, email automation, and intelligent notification systems. The strengths, limitations, and research contributions of existing studies are analyzed to identify the existing research gap. The insights obtained from this review provide the foundation for the proposed *AI Based Meeting Minutes Generator and Automatic Email Dispatcher*, which

aims to integrate meeting minute generation, manager verification, automated email dispatch, task monitoring, and reminder notifications into a single intelligent platform.

A. AI-Based Meeting Summarization and Meeting Intelligence

Meeting summarization has become one of the most active research areas in Artificial Intelligence due to the increasing demand for efficient documentation of virtual and hybrid meetings. Modern AI techniques, particularly Large Language Models (LLMs), Automatic Speech Recognition (ASR), and Natural Language Processing (NLP), enable intelligent systems to automatically generate concise meeting summaries, identify important discussion points, and extract action items from lengthy conversations.

Chen *et al.* [2] proposed an AI-assisted meeting reflection system that combines active and passive goal reflection techniques to improve meeting productivity. Their work demonstrated that AI-generated reflections help participants monitor progress, evaluate discussions, and remain aligned with meeting objectives. Similarly, Asthana *et al.* [13] developed an LLM-powered meeting recap system capable of generating summaries, highlights, and action items. Their evaluation showed that large language models significantly improve the quality and readability of meeting documentation while reducing the manual effort required for preparing meeting minutes.

Earlier research by Purver *et al.* [9] introduced methods for detecting action items from multi-party meetings using annotated conversational datasets. Their work established the importance of automatically identifying tasks and responsibilities from meeting discussions. Likewise, Banerjee and Rudnicky [12] proposed agenda-based meeting segmentation techniques that divide long discussions into meaningful sections, thereby improving the organization and readability of meeting transcripts.

These studies demonstrate that AI-based meeting summarization techniques effectively reduce manual documentation effort while improving the quality of meeting records. However, most existing systems focus primarily on generating summaries and extracting action items without integrating task monitoring, manager verification, automated email communication, and reminder services into a single platform. This limitation motivates the development of the proposed intelligent meeting management system.

B. AI-Based Task and Workflow Automation

Artificial Intelligence has significantly improved task management and workflow automation by enabling intelligent systems to prioritize tasks, monitor progress, and support decision-making with minimal human intervention. The integration of Machine Learning (ML), Natural Language Processing (NLP), and Large Language Models (LLMs) has enabled organizations to automate repetitive activities, optimize business processes, and improve overall operational efficiency.

Gaayathri and Sree [1] proposed *ProTask AI*, an LLM-based task management system that automatically organizes tasks, prioritizes activities, and assists users in managing their

daily schedules. Their implementation demonstrated high task completion accuracy while improving productivity through intelligent task organization. Similarly, Dumas *et al.* [5] presented an AI-augmented Business Process Management framework that integrates Artificial Intelligence into workflow management to improve process optimization, decision support, and operational efficiency across organizations.

Zdravković *et al.* [6] explored AI-enabled Enterprise Information Systems for manufacturing environments. Their research demonstrated how intelligent enterprise systems improve resource planning, workflow coordination, and information sharing through AI-driven automation. Likewise, Sarker [7] provided a comprehensive review of AI-based modeling techniques and highlighted their applications in intelligent automation, smart systems, and industrial decision-making.

Human-AI collaboration has also gained increasing attention in workflow automation. Cabrero-Daniel *et al.* [10] investigated customized LLM-based meeting assistants designed for Agile software development teams. Their study demonstrated that AI assistants can improve meeting efficiency, facilitate collaborative decision-making, and automate documentation tasks while supporting software development workflows.

Although these studies successfully demonstrate the benefits of AI-driven workflow automation and intelligent task management, they mainly focus on task organization and business process optimization. Most existing systems do not integrate AI-generated meeting minutes, manager verification, automatic email communication, employee task monitoring, and reminder notifications within a unified framework. This limitation motivates the development of the proposed AI-powered meeting management system, which combines these functionalities into a single intelligent platform.

C. Email Automation and Intelligent Notification Systems

Effective communication is essential for successful project execution and organizational collaboration. Email remains one of the primary communication channels for distributing meeting outcomes, assigning responsibilities, and monitoring task progress. Recent advancements in Artificial Intelligence (AI), Natural Language Processing (NLP), Machine Learning (ML), and Large Language Models (LLMs) have enabled intelligent systems capable of automating email processing, task creation, reminder generation, and workflow execution. These technologies reduce manual effort while improving communication efficiency and ensuring timely completion of assigned tasks.

Mathew [3] proposed an AI-based email sorting and summarization system that automatically classifies emails and generates concise summaries, enabling users to manage large volumes of communication more efficiently. Similarly, Li and Sun [8] developed an intelligent mobile application that converts email conversations into structured tasks using Artificial Intelligence and Machine Learning techniques. Their approach effectively bridges communication and task management by

automatically identifying actionable information from email content.

Morrison *et al.* [4] investigated AI-powered reminder systems for collaborative work environments and demonstrated that intelligent reminders improve accountability, increase task completion rates, and strengthen team coordination. Likewise, Wen *et al.* [11] introduced AutoDroid, an LLM-powered task automation framework capable of performing complex user tasks through intelligent reasoning and automated workflow execution. Their research highlights the capability of Large Language Models to automate repetitive activities and improve organizational productivity.

Although these studies demonstrate the effectiveness of AI in email automation, reminder generation, and task management, most existing systems focus on individual functionalities rather than providing an integrated meeting management solution. They generally lack support for AI-generated meeting minutes, manager verification before distribution, automatic email dispatch of approved meeting minutes, employee task tracking, and continuous reminder notifications within a single platform.

The proposed *AI Based Meeting Minutes Generator and Automatic Email Dispatcher* addresses these limitations by integrating AI-powered meeting minute generation, automated email communication, intelligent task monitoring, and reminder services into one unified system. This integrated approach simplifies post-meeting management, enhances communication efficiency, improves accountability, and reduces administrative workload.

III. COMPARATIVE ANALYSIS

Table I presents a comparative analysis of the twenty reviewed studies based on the methodology or technology adopted, major contributions, and limitations. The comparison shows that existing research has addressed different aspects of meeting management, including meeting summarization, action-item extraction, task automation, workflow optimization, email processing, and intelligent decision support. However, most studies focus on individual functionalities rather than integrating these capabilities into a unified post-meeting management framework.

A. Research Gap

The literature survey indicates that considerable progress has been made in the areas of AI-assisted meeting summarization, workflow automation, intelligent task management, email processing, and reminder systems. Existing research demonstrates that Artificial Intelligence (AI), Natural Language Processing (NLP), Machine Learning (ML), and Large Language Models (LLMs) can effectively automate individual tasks, thereby reducing manual effort and improving organizational productivity. However, most existing solutions address these functionalities independently and do not provide a comprehensive platform that manages the complete post-meeting workflow.

Many meeting summarization systems are capable of generating concise meeting minutes and identifying action items, but they do not provide facilities for managerial verification before sharing the generated content. Similarly, AI-based task management applications efficiently organize and prioritize tasks, yet they are not directly integrated with meeting discussions or automatically generated meeting minutes. Email automation and reminder systems improve communication efficiency, but they generally function as standalone applications without utilizing information extracted from meeting conversations.

Another major limitation observed in the existing literature is the lack of an integrated framework that combines meeting transcription, AI-generated meeting minutes, action item extraction, manager approval, automated email dispatch, employee task monitoring, and reminder notifications. Organizations often depend on multiple software applications to perform these activities, leading to duplicated effort, communication delays, inconsistent documentation, and reduced operational efficiency.

To overcome these limitations, the proposed *AI Based Meeting Minutes Generator and Automatic Email Dispatcher* integrates AI-powered meeting minute generation, intelligent task extraction, manager verification, automated email communication, dashboard-based task monitoring, and reminder notifications into a single platform. The proposed system aims to improve meeting documentation, enhance organizational communication, increase accountability, and simplify post-meeting management through an end-to-end AI-driven solution.

B. Summary of Literature Survey

The literature survey demonstrates that Artificial Intelligence (AI) has significantly advanced the fields of meeting management, workflow automation, email processing, and intelligent task management. Recent developments in Natural Language Processing (NLP), Automatic Speech Recognition (ASR), Machine Learning (ML), and Large Language Models (LLMs) have enabled systems to automatically generate meeting summaries, extract action items, automate workflows, and enhance organizational communication.

The reviewed studies indicate that AI-powered meeting assistants effectively summarize discussions and identify important decisions, while workflow automation systems improve task organization and business process management. Similarly, AI-based email processing and reminder systems facilitate timely communication and efficient task execution.

The analysis of the existing literature reveals the need for a comprehensive system that combines AI-based meeting minute generation, action item extraction, manager verification, automated email dispatch, employee task monitoring, and intelligent reminder notifications within a single framework. Motivated by these research gaps, the proposed *AI Based Meeting Minutes Generator and Automatic Email Dispatcher* aims to provide an end-to-end solution that improves meeting documentation, enhances communication, increases accountability, and supports efficient organizational collaboration.

REFERENCES

- [1] M. V. Gaayathri and K. S. Sree, "ProTask AI: GenAI Integrated Task Manager," *International Journal of Innovative Research in Computer and Communication Engineering*, vol. 14, no. 6, Jun. 2026, doi: 10.15680/IJRCCCE.2026.1406035.
- [2] X. Chen, L. Tankelevitch, R. Vanukuru, A. E. Scott, P. Panda, and S. Rintel, "Are We On Track? AI-Assisted Active and Passive Goal Reflection During Meetings," in *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*, Apr. 2025, pp. 1–22, doi: 10.1145/3706598.3714052.
- [3] A. R. Mathew, "AI-Based Email Sorting and Summarization," *International Journal for Research in Applied Science and Engineering Technology*, vol. 14, no. 3, pp. 627–629, Mar. 2026, doi: 10.22214/ijraset.2026.77921.
- [4] K. Morrison, S. Iqbal, and E. Horvitz, "AI-Powered Reminders for Collaborative Tasks: Experiences and Futures," arXiv:2403.01365, Mar. 2024, doi: 10.48550/arXiv.2403.01365.
- [5] M. Dumas *et al.*, "AI-Augmented Business Process Management Systems: A Research Manifesto," *ACM Transactions on Management Information Systems*, vol. 14, no. 1, pp. 1–19, Mar. 2023, doi: 10.1145/3576047.
- [6] M. Zdravković, H. Panetto, and G. Weichhart, "AI-enabled Enterprise Information Systems for Manufacturing," *Enterprise Information Systems*, vol. 16, no. 4, pp. 668–720, Apr. 2022, doi: 10.1080/17517575.2021.1941275.
- [7] I. H. Sarker, "AI-Based Modeling: Techniques, Applications and Research Issues Towards Automation, Intelligent and Smart Systems," *SN Computer Science*, vol. 3, no. 2, p. 158, Mar. 2022, doi: 10.1007/s42979-022-01043-x.
- [8] Y. Li and Y. Sun, "An Intelligent Mobile Application to Automate the Conversion of Emails to Task Management using AI and Machine Learning," in *Computer Science & Technology Trends*, AIRCC, May 2022, pp. 13–21, doi: 10.5121/csit.2022.120802.
- [9] M. Purver, P. Ehlen, and J. Niekraz, "Detecting Action Items in Multi-party Meetings: Annotation and Initial Experiments," in *Machine Learning for Multimodal Interaction*, LNCS, vol. 4299, Springer, 2006, pp. 200–211, doi: 10.1007/11965152_18.
- [10] B. Cabrero-Daniel, T. Herda, V. Pichler, and M. Eder, "Exploring Human-AI Collaboration in Agile: Customised LLM Meeting Assistants," arXiv:2404.14871, Apr. 2024, doi: 10.48550/arXiv.2404.14871.
- [11] H. Wen *et al.*, "AutoDroid: LLM-powered Task Automation in Android," in *Proceedings of the 30th Annual International Conference on Mobile Computing and Networking*, ACM, May 2024, pp. 543–557, doi: 10.1145/3636534.3649379.
- [12] S. Banerjee and A. I. Rudnick, "Segmenting Meetings into Agenda Items by Extracting Implicit Supervision from Human Note-taking," in *Proceedings of the 12th International Conference on Intelligent User Interfaces*, Honolulu, HI, USA, Jan. 2007, pp. 151–159, doi: 10.1145/1216295.1216325.
- [13] S. Asthana, S. Hilleli, P. He, and A. Halfaker, "Summaries, Highlights, and Action Items: Design, Implementation and Evaluation of an LLM-powered Meeting Recap System," *Proceedings of the ACM on Human-Computer Interaction*, vol. 9, no. 2, pp. 1–29, May 2025.
- [14] M. Steyvers and A. Kumar, "Three Challenges for AI-Assisted Decision-Making."
- [15] K. Wang, X. Zhao, and W. Peng, "Learning from Failure: Improving Meeting Summarization without Good Samples," in *Proceedings of the AAAI Conference on Artificial Intelligence*, vol. 38, no. 17, pp. 19153–19161, Mar. 2024, doi: 10.1609/aaai.v38i17.29883.
- [16] F. Kirstein, T. Ruas, and B. Gipp, "What's Wrong? Refining Meeting Summaries with LLM Feedback," arXiv:2407.11919, Jul. 2024.
- [17] F. Kirstein, T. Ruas, R. Kratel, and B. Gipp, "Tell Me What I Need to Know: Exploring LLM-based (Personalized) Abstractive Multi-Source Meeting Summarization," arXiv:2410.14545, Oct. 2024.
- [18] M. T. R. Laskar, E. Khasanova, X.-Y. Fu, C. Chen, and S. B. T. N., "Query-OPT: Optimizing Inference of Large Language Models via Multi-Query Instructions in Meeting Summarization," arXiv:2403.00067, Feb. 2024.
- [19] L. R. Nishath Anjum, S. Saqeeb, T. B. S. Thanushree, and I. Khan, "Meeting Summarizer Using NLP," *Iconic Research and Engineering Journals*, vol. 9, no. 4, pp. 1975–1981, Oct. 2025, doi: 10.64388/IREV914-1712104.
- [20] S. K., R. Ganesh, S. Sadhana, and N. Saraswathi, "Organizational Intelligence Extraction from Meeting Transcripts," *International Advanced Research Journal in Science, Engineering and Technology*, 2026, doi: 10.17148/IARJSET.2026.13494.

IV. CONCLUSION

The reviewed literature demonstrates the growing role of Artificial Intelligence, Natural Language Processing, Automatic Speech Recognition, and Large Language Models in meeting management and organizational automation. Existing studies have successfully addressed individual functions such as meeting summarization, action-item extraction, task management, email processing, and intelligent reminders. However, the comparative analysis indicates that these functionalities are generally implemented as separate solutions.

The identified research gap highlights the need for a more integrated approach that combines meeting-minute generation, action-item extraction, manager verification, automated email dispatch, task monitoring, and reminder notifications. The reviewed studies therefore provide a strong foundation for further development of integrated AI-based meeting management solutions.

TABLE I
COMPARATIVE ANALYSIS OF EXISTING LITERATURE

Ref.	Author(s)	Year	Technology/Method	Key Contribution	Limitation
[1]	Gaayathri and Sree	2026	LLM-based Task Management	Automates task organization and prioritization using generative AI	Does not integrate meeting-minute generation and email communication
[2]	Chen et al.	2025	AI-assisted Meeting Reflection	Uses AI to support active and passive goal reflection during meetings	Focuses on meeting reflection rather than complete post-meeting automation
[3]	Mathew	2026	AI-based Email Summarization	Automatically sorts and summarizes email content for efficient communication	Limited to email processing and does not analyze meeting discussions
[4]	Morrison et al.	2024	AI-powered Reminder System	Uses intelligent reminders to support collaborative task completion	Does not generate meeting minutes or extract tasks directly from meetings
[5]	Dumas et al.	2023	AI-augmented BPM	Explores the integration of AI into business process management and workflow optimization	Provides a general workflow framework without specialized meeting management
[6]	Zdravković et al.	2022	Enterprise AI Systems	Examines AI-enabled enterprise information systems for workflow and resource coordination	Primarily focused on enterprise and manufacturing environments
[7]	Sarker	2022	AI-based Modeling	Reviews AI techniques and their applications in intelligent and automated systems	Provides a broad research overview rather than a meeting-specific implementation
[8]	Li and Sun	2022	Email-to-Task Automation	Converts relevant email information into structured tasks using AI and ML	Does not include meeting transcription or meeting summarization
[9]	Purver et al.	2006	Action Item Detection	Investigates automatic identification of action items from multi-party meetings	Uses earlier NLP approaches with limited capabilities compared with modern LLMs
[10]	Cabrero-Daniel et al.	2024	LLM-based Meeting Assistant	Explores customized LLM assistants for supporting collaboration in Agile meetings	Does not provide automated email dispatch and continuous task monitoring
[11]	Wen et al.	2024	LLM-based Task Automation	Uses large language models for intelligent task execution and workflow automation	Designed primarily for Android task automation rather than meeting management
[12]	Banerjee and Rudnický	2007	Meeting Segmentation	Segments meetings into agenda-based sections to organize conversational content	Segmentation does not directly generate summaries or structured action items
[13]	Asthana et al.	2025	LLM-based Meeting Recap	Generates meeting summaries, highlights, and action items using an LLM	Does not provide a complete manager approval and automated distribution workflow
[14]	Steyvers and Kumar	2025	AI-assisted Decision Support	Examines AI support for information interpretation and organizational decision-making	Focuses on decision support rather than meeting documentation and task tracking
[15]	Wang et al.	2024	AI-based Meeting Summarization	Investigates methods for improving meeting summarization by learning from imperfect outputs	Primarily concentrates on summary quality and does not address post-meeting communication
[16]	Kirstein et al.	2024	LLM Feedback-based Summarization	Uses LLM feedback to refine and improve automatically generated meeting summaries	Focuses on summary refinement without integrated task management or email automation
[17]	Kirstein et al.	2024	Personalized Multi-source Summarization	Explores personalized abstractive summarization using information from multiple meeting sources	Does not provide automated action assignment, approval, or email dispatch
[18]	Laskar et al.	2024	Query-optimized LLM Summarization	Investigates multi-query instructions to improve LLM inference for meeting summarization	Concentrates on summarization optimization rather than complete meeting workflow automation
[19]	Nishath Anjum et al.	2025	NLP-based Meeting Summarization	Uses NLP techniques to generate concise summaries from meeting content	Limited integration with task tracking, managerial verification, and automated communication
[20]	S. K. et al.	2026	Meeting Transcript Intelligence	Extracts organizational intelligence and useful information from meeting transcripts	Focuses on information extraction without an integrated post-meeting management workflow