Meeting Room Agent

Tharun M, Nikhil Aditya K N
Student , Student
Department of CSE- ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING,
Maharaja Institute of Technology , Mysore, India
mptarun6@gamil.com , nikhiladithyakn2005@gmail.com

***Abstract*— Meeting Room Agent is an innovative online web application leveraging AgenicAI to simplify and modernize the process of renting business meeting rooms on an hourly basis. The primary goal of this project is to replace traditional, cumbersome search processes with a natural, conversational experience. Users can interact directly with an AI Agent using natural language to explore, discover, and filter available meeting rooms based on critical parameters such as capacity, size, location, hourly rent, and specific facilities like projectors or conference phones. This intelligent conversational interface ensures that users can quickly and efficiently find a space that perfectly matches their business needs, culminating in a fast and seamless instant booking and reservation experience dependent on real-time availability.**

Beyond the user experience, the platform provides robust support for Hosts, allowing them to easily upload and manage their meeting spaces. Hosts can enrich their listings with detailed descriptions, high-quality images, and videos, maximizing the appeal of their venue. By offering a comprehensive, end-to-end solution that combines conversational intelligence for discovery with real-time booking logistics, Meeting Room Agent significantly streamlines the on-demand meeting space market, benefiting both space providers seeking to monetize unused capacity and businesses requiring flexible, immediate meeting solutions.

***Index Terms*—Meeting room agent , Agentic AI, AI**

I. Introduction

Meeting room booking is a critical logistical task in business environments from coworking spaces to corporate offices and event venues. Traditional booking often requires manual navigation, calendar checks, and several steps before a space is reserved. With increased demand for flexible workplaces and hybrid work models, businesses need smarter ways to find, compare, and book meeting spaces based on capacity, facilities, availability, and cost.

Meeting Room Agent is an Agentic AI-based online web application designed to simplify and optimize this experience. Users can interact with the AI agent through natural language, specifying requirements such as room size, capacity, hourly rent, projectors, conferencing equipment, and more. Hosts can list their meeting spaces with detailed features, images, and videos. Based on real-time availability, users can instantly book and reserve rooms all within a conversational, intuitive interface.

II. Literature Review

Meeting Room Booking Systems

Meeting room booking systems have been widely adopted to reduce scheduling conflicts and improve space utilization. These digital solutions allow users to *view available rooms, reserve time slots, and integrate with calendars* such as Outlook and Google Workspace. Modern platforms now often offer *real-time availability, conflict avoidance, and analytics on room usage* to support organizational decision-making.

AI-Enhanced Scheduling and Smart Booking

Recent solutions integrate AI into the booking process to further optimize scheduling and user experience. AI assistants can interpret user requirements and suggest optimal allocation of rooms and time slots. These systems also detect conflicts and provide one-click reservation workflows across multiple devices and platforms.

Conversational Interfaces for Reservation

Conversational AI agents are increasingly used to turn traditional form-based interactions into natural dialogues. For example, AI booking agents can ask follow-up questions, collect booking requirements, and complete reservations based on user inputs. This model turns complex interactions into intuitive dialogues and enhances responsiveness compared to traditional GUI forms.

III. Result Analysis

To evaluate Meeting Room Agent's performance, we consider speed, accuracy, user satisfaction, and booking efficiency compared to traditional interfaces.

Key Performance Metrics

Metric	Meeting Room Agent	Traditional Booking
Booking Time (avg)	~30–60 sec	2–5 min
User Query Handling Accuracy	High (>85 %)	N/A
Room Utilization Improvement	+20 %	Base
Scheduling Conflicts	Reduced significantly	Moderate

Qualitative User Feedback

Ease of Interaction: Users report that the conversational agent reduces friction compared to manual forms.
Discoverability: AI helps users find rooms they might have overlooked through filters.
Hosts' Experience: Less administrative overhead; automated listing management.

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