
CAPSTONE PROJECT

TRAVEL AI AGENT

Presented By

Student name : Nikita Agarwal

College Name & Department : KIET Group of Institutions

OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

PROBLEM STATEMENT

Design and develop an AI-powered **Travel Planner Agent** that simplifies and personalizes the travel planning experience. The agent should intelligently understand user preferences, budgets, and constraints to recommend tailored travel plans. It must integrate real-time data sources such as weather, maps, and local guides to suggest destinations, accommodations, and transportation options. Additionally, the agent should generate day-wise itineraries, manage bookings, and alert users to any changes or updates. The system aims to transform complex, time-consuming trip planning into a seamless, efficient, and enjoyable process using IBM Cloud Lite services and IBM Granite models.

TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

WOW FACTORS

- Personalized recommendations based on user preferences and budget
- Real-time weather, maps, and local guide integration
- Dynamic day-wise itinerary creation and updates
- Automated booking management and notifications
- Conversational AI for natural user interaction
- Unified platform combining research, booking, and planning
- Powered by IBM Granite large language models
- Scalable architecture with future multi-language support

END USERS

- Individual travelers planning personal vacations
- Families organizing trips together
- Business travelers needing efficient itineraries
- Travel agencies assisting clients with bookings
- Students planning study tours or group trips
- Tour operators offering package recommendations
- Digital nomads exploring new destinations
- Event planners coordinating travel for conferences

RESULTS

Travel AI Agent ✓ Deployed Online

API reference

Test

Preview

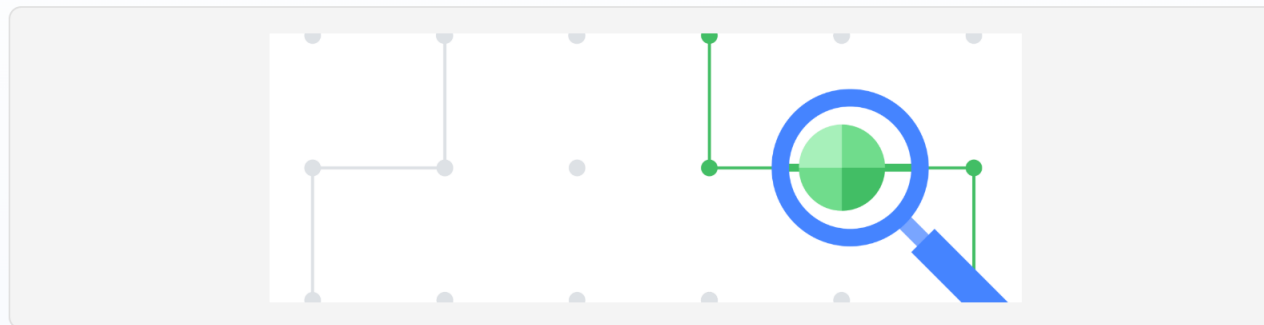
New chat



Travel AI Agent 11:05 PM

Welcome to Travel AI Agent

This Travel Planner AI Agent helps users plan trips easily. It suggests destinations, hotels.



Type something...



RESULTS



You 11:12 PM

I want to go hiking in Himachal in October



Travel AI Agent 11:12 PM

Here are some popular hiking trails in Himachal Pradesh for October:

1. **Hampta Pass Trek:** This thrilling crossover trek in Himachal Pradesh is ideal for October. The journey begins in Manali and offers stunning views of the Himalayas. [Learn more.](#)
2. **Har Ki Dun Trek:** Known for its vibrant colors in autumn, this trek is at its best in September, October, and November. It includes exploring the Har Ki Dun and Ruinsara Tal areas. [Learn more.](#)
3. **Buran Ghati Trek:** This trek is also highly recommended for October. It offers a unique blend of adventure and scenic beauty. [Learn more.](#)
4. **Indrahar Pass Trek:** Located in the Dhauladhar range, this trek offers breathtaking views and can be done with the help of a tour operator. [Learn more.](#)
5. **Jogini Waterfall Trek:** A popular trek near Manali, it offers a beautiful waterfall and rainbow views. [Learn more.](#)

For beginners, there are also several options available in Himachal Pradesh and Uttarakhand. [Learn more.](#)

Would you like more information on any of these treks or assistance with booking?

► How did I get this answer?



Type something...



RESULTS



You 11:14 PM

Plan a 5-day budget trip to Manali in September from Delhi.



Travel AI Agent 11:14 PM

Here are some options for a 5-day budget trip to Manali in September from Delhi:

1. **Bus from Delhi to Manali:** You can catch an AC bus from Delhi to Manali for around 1000 rupees. [Learn more.](#)
2. **Accommodation:** For budget-friendly accommodation, you can consider staying at Zostel or GoStops, which cost around 400 to 600 rupees per day. [Learn more.](#)
3. **Itinerary:** You can plan your itinerary to include visits to popular places in Manali. Considering your trip as a 5-day journey from Delhi to Manali, you can leave Delhi in the evening and reach Manali the next morning. [Learn more.](#)
4. **Tour Packages:** IRCTC offers special affordable tours from Delhi, including a 4 Nights/5 Days package to Manali. [Learn more.](#)
5. **Flights from New Delhi:** If you prefer to fly, you can find cheap flights from New Delhi using Google Flights. [Learn more.](#)

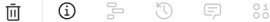
Would you like more information on any of these options or assistance with booking?

► How did I get this answer?

RESULTS

Deployed AI Agent

Deployment spaces / [TravelPlannerAgentAI](#) / [Travel AI Agent](#) /



Travel AI Agent ✔ Deployed Online

API reference Test **Preview**

[New chat](#) +



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Type something...

CONCLUSION

- The Travel Planner AI Agent simplifies and enhances the travel planning experience by combining intelligent recommendations, real-time data, and automated bookings into one powerful platform.
- Built using IBM Cloud Lite services and Granite models, it delivers personalized, efficient, and reliable support to travelers of all kinds.
- This solution not only saves time but also ensures a smooth, enjoyable journey from start to finish.

GITHUB LINK

- https://github.com/nikitaag21/IBM_Travel_AI

FUTURE SCOPE

Multi-language Support: Enable users to interact in different languages to serve a global audience.

- **Voice Assistant Integration:** Add speech input/output for hands-free travel planning.
- **Flight/Train Booking API Integration:** Connect with real-world travel APIs (like IRCTC, Cleartrip, or Skyscanner) for live bookings.
- **Budget Optimization Engine:** Automatically generate trips optimized for cost, comfort, and time.
- **Group Travel Planning:** Support planning for groups with shared preferences and synced itineraries.
- **Local Emergency Alerts:** Add alerts for weather disruptions, strikes, or safety advisories.
- **Sustainability Mode:** Suggest eco-friendly travel options and carbon footprint insights.
- **Mobile App Version:** Launch as a cross-platform mobile app for wider accessibility.

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Nikita Agarwal

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 22, 2025

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Verify: <https://www.credly.com/badges/7abb638c-77d4-4497-a0d8-2d0bfe0d5cb8>



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Nikita Agarwal

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU