
CAPSTONE PROJECT

TRAVEL AGENT

Presented By:

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OUTLINE

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

PROBLEM STATEMENT

Planning travel is often time-consuming, fragmented, and inefficient. Travelers need to research destinations, compare transportation and accommodation, and build itineraries—often from scratch.

Proposed Solution:

An AI-powered Travel Planner Agent that simplifies trip planning by understanding user preferences, budget, and constraints. It provides real-time destination suggestions, custom itineraries, transport & stay options, integrated maps, local guides, booking management, and dynamic travel updates. This transforms planning into a smooth and enjoyable experience

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 – for building the AI agent
- IBM Cloud Watsonx AI runtime – for deploying the model
- IBM Cloud Agent Lab – for testing and managing the agent pipeline
- IBM Granite foundation model – to power natural interactions

WOW FACTORS

- Real-time destination & itinerary planning
- Dynamic schedule adjustment based on flight/train delays
- Personalized recommendations based on budget and interests
- Integrated with maps, weather, and booking platforms
- Alerts for weather changes, travel disruptions
- Multilingual travel assistant
- Offline support for saved trips & guidance

END USERS

- Tourists and travelers
- Travel agencies and tour operators
- Backpackers and solo adventurers
- Corporate/business travelers
- Students planning educational trips

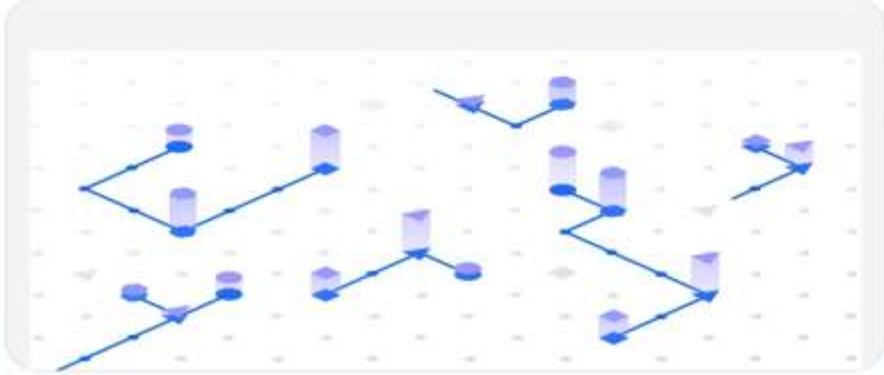
RESULTS

- Deployed AI Agent via IBM Cloud
- Users receive a custom itinerary based on input

AI_Travel_Agent 11:16 PM

Welcome to AI_Travel_Agent

Your smart travel assistant for planning trips, routes, stays, and experiences easily.



Sample questions

Plan a trip for me based on my budget →

What are the top destinations this season? →

Check weather for my travel dates →

Recommend places for solo travel →

RESULTS

Live demo enables trip planning in under 2 minutes

JG

You: 11:16 PM

What are the top destinations this season?

AI_Travel_Agent

AI_Travel_Agent 11:16 PM

Based on recent articles, some of the top travel destinations for this season include:

1. [Talatal Ruins](#) - A mesmerizing view through the arched corridors at the ruins of the Talatal.
2. [Costalegre, Mexico](#), [Grenada](#), [Sanibel Island, Florida](#), [Santa Monica, California](#), [St. Vincent and the Grenadines](#), [Turks and Caicos](#) - These are some of the best places to travel in 2025 according to Travel + Leisure.
3. [Grand Canyon](#) - A visit to the Grand Canyon is a bucket list experience for many.
4. [Traverse City, Michigan](#), [New Hampshire](#), [Black Hills of South Dakota](#), [Inside Passage of Alaska](#) - Samantha Brown's picks for the best summer vacation spots in the US.
5. [Christmas Trips](#) - Kriszti's top travel destinations for Christmas 2024.
6. [Local Travel Destinations during Christmas](#) - Popular local travel destinations during the Christmas season in the Philippines.

Please note that travel trends can change rapidly, so it's always a good idea to check the latest information from reliable travel sources.

► How did I get this answer?

RESULTS

Prototype supports personalized suggestions for hotels, flights, attractions



AI_Travel_Agent 11:17 PM

Here's a suggested 5-day itinerary for your trip to India:

Day 1: Delhi

- Start your journey in the capital city, Delhi. Visit the iconic Red Fort, Jama Masjid, and Chandni Chowk. In the evening, explore the vibrant markets of Dilli Haat for shopping and local cuisine.

Day 2: Delhi to Agra (approx. 2 hours drive)

- Head to Agra early in the morning to witness the breathtaking Taj Mahal at sunrise. Afterward, visit the Agra Fort and explore the local bazaars for handicrafts and souvenirs.

Day 3: Agra to Jaipur (approx. 4 hours drive)

- Travel to Jaipur, the 'Pink City'. Visit the Hawa Mahal, City Palace, and Jantar Mantar. In the evening, explore the bustling Jaipur markets for local handicrafts and spices.

Day 4: Jaipur

- Spend the day exploring the Amer Fort and enjoying a cultural experience at Chokhi Dhani, a traditional Rajasthani village.

RESULTS

Deployed AI Agent

IBM watsonx

Upgrade

JG

Deployment spaces / AI_Travel_Agent / AI_Travel_Agent /

AI_Travel_Agent

Deployed

Online

API reference

Test

Evaluations

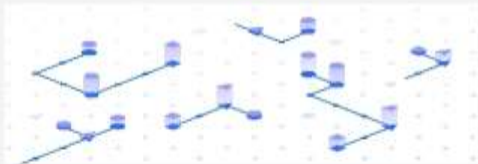
Preview

New chat +

AI_Travel_Agent 12:20 AM

Welcome to AI_Travel_Agent

Your smart travel assistant for planning trips, routes, stays, and experiences easily.



Quick start samples

Plan a trip for me based on my budget

→

What are the top destinations this season?

→

Check weather for my travel dates

→

Recommend places for solo travel

→

CONCLUSION

- The Travel Planner Agent automates and personalizes the trip planning experience, reducing stress and improving travel efficiency.
- It brings together real-time data, intelligent suggestions, and user-focused customization, making it a valuable assistant for modern travelers.
- Future integrations can include ticket booking, visa support, and AR-based local guides

FUTURE SCOPE

- Integration with booking APIs (MakeMyTrip, Booking.com)
- Voice-activated itinerary assistant
- Expense tracker for travel budget management
- Smart recommendations based on past trips
- Cross-platform mobile app version
- Local language support with real-time translation
- Emergency contact & alert system integration

IBM CERTIFICATIONS



IBM CERTIFICATIONS



IBM SkillsBuild

Completion Certificate



This certificate is presented to

Jay Gupta

for the completion of

Introduction to Artificial Intelligence

(MDL-211)

According to the Moodle system of record

Completion date: 15 Jul 2025 (GMT)

Learning hours: 1 hr 15 mins

GITHUB LINK

https://github.com/JayGupta11/AI_Travel_Agent



THANK YOU