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# **CAPSTONE PROJECT**

## **TRAVEL PLANNER AGENT**

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# OUTLINE

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

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# PROBLEM STATEMENT

A Travel Planner Agent is an AI-powered assistant that helps users plan trips efficiently and intelligently. It uses real-time data to suggest destinations, build itineraries, and recommend transport and accommodation options. By understanding user preferences, budgets, and constraints, it tailors personalized travel plans. Integrated with maps, weather updates, and local guides, it ensures a smooth travel experience. The agent can also manage bookings, alert users to changes, and optimize schedules on the go. This smart assistant transforms complex travel planning into a seamless, enjoyable process.

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# TECHNOLOGY USED

- IBM cloud lite services
- Retrieval Augmented Generation (RAG)
- IBM Granite model

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## IBM CLOUD SERVICES USED

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

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# WOW FACTORS

- Personalized Itinerary in Seconds
- AI-Powered Travel Assistant
- Smart Weather Awareness
- Zero Manual Planning
- Beginner-Friendly & Interactive

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## END USERS

- Tourists & Solo Travelers
- Families Planning Vacations
- Travel Agencies
- Travel Bloggers & Influencers
- College Students & Backpackers

# RESULTS

cloud.ibm.com/login - Search | Agent Lab (beta) — Docs | IBM w... | Agent Lab — Travel\_Agent | IBM v... | +

https://datapatform.cloud.ibm.com/wx/agents?context=wx&project\_id=f150c7de-b575-459a-ad40-4b7fba1280d6

Sign in

IBM watsonx Upgrade ? Unsaved New agent + Deploy

Projects / Travel\_Agent / Agent Lab

**Build** AI Model: granite-3-3-8b-instruct

**Knowledge**

Vector index

travel\_dataset

A vector index searches documents for relevant information to ground the model. Upload the files to index or select an existing index.

**Tools**

Add a tool Create custom tool

Added tools (2)

**Google search**

Retrieve information from the internet with the Google search engine.

**Document search - travel\_dataset**

Search documents with vector indexes.

**Model parameters**

Frequency penalty -2 2 0

Presence penalty -2 2 0

Temperature 0 2 0

Top P (nucleus sampling) 0.01 1 1

Max tokens 2000

Random seed

**Agent preview**

Travel Agent 12:45 PM

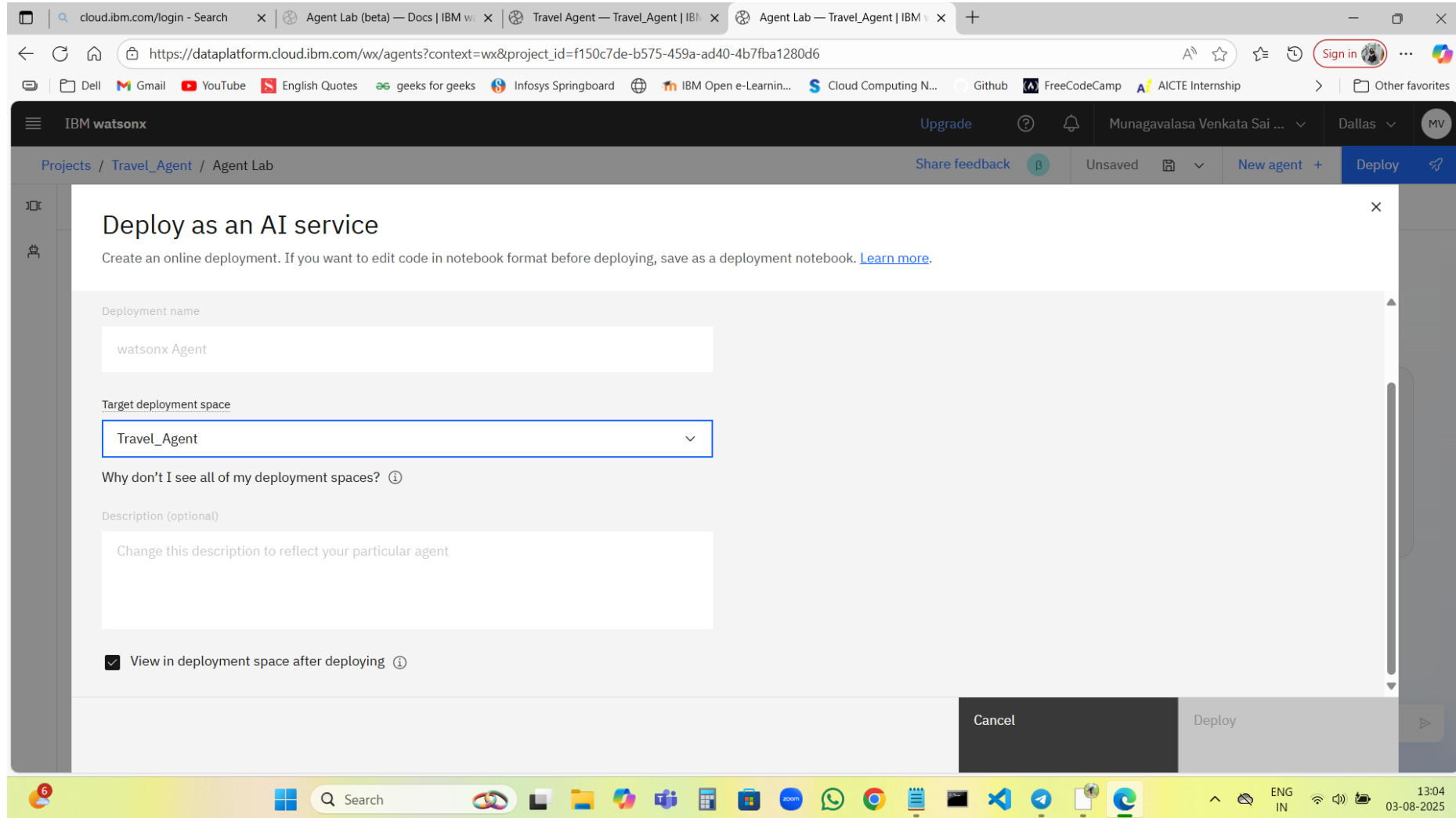
Welcome to Travel Agent

Change this description to reflect your particular agent

Type something...



## RESULTS



## RESULTS

[illegible]

# RESULTS

## Deployed AI Agent

The screenshot shows the IBM watsonx Agent interface in a web browser. The browser tabs include 'cloud.ibm.com/login', 'Agent Lab (beta) - Docs | IBM w...', 'Travel Agent - Travel\_Agent | IB...', 'watsonx Agent - Travel\_Agent | X', and 'Settings | IBM watsonx'. The URL bar shows a long URL for a deployment. The interface has a dark header with 'IBM watsonx' and a user profile 'Munagavalasa Venkata Sai ...'. Below the header, there's a breadcrumb 'Deployment spaces / Travel\_Agent / watsonx Agent /'. The main content area shows 'watsonx Agent' with a green 'Deployed' status and an 'Online' indicator. There are three tabs: 'API reference', 'Test', and 'Preview', with 'Preview' being the active tab. A 'New chat +' button is on the right. The chat history shows a user message: 'You 01:15 PM give me a 5 dias plan to paris'. The agent's response is: 'watsonx Agent 01:15 PM Here's a 5-day plan to Paris: Day 1: • Morning: Visit the Eiffel Tower • Afternoon: Explore the Musée d'Orsay • Evening: Enjoy a Seine River cruise Day 2: • Morning: Visit the Louvre Museum'. A text input field at the bottom contains 'Type something...'. The Windows taskbar at the bottom shows the time as 13:16 on 03-08-2025.

This screenshot shows the same IBM watsonx Agent interface, but with a more detailed response from the agent. The chat history shows the user's message: 'You 01:15 PM give me a 5 dias plan to paris'. The agent's response is: 'watsonx Agent 01:15 PM Here's a 5-day plan to Paris: Day 1: • Morning: Visit the Eiffel Tower • Afternoon: Explore the Musée d'Orsay • Evening: Enjoy a Seine River cruise Day 2: • Morning: Visit the Louvre Museum Day 3: • Morning: Visit the Notre-Dame Cathedral • Afternoon: Explore the Palace of Versailles • Evening: Enjoy a cabaret show at the Moulin Rouge Day 4: • Morning: Visit the Arc de Triomphe • Afternoon: Shop at the Galeries Lafayette • Evening: Enjoy dinner at a Michelin-starred restaurant Day 5: • Morning: Visit the Musée Rodin • Afternoon: Explore the Sainte-Chapelle'. The text input field at the bottom contains 'Type something...'. The Windows taskbar at the bottom shows the time as 13:16 on 03-08-2025.

## CONCLUSION

- The **Travel Planner Agent** project demonstrates how AI can be used to make travel planning easier, faster, and more personalized. By taking basic input like destination, duration, budget, and interests, the system generates a smart day-by-day travel itinerary using AI.
- This project helped me learn how to combine user input, datasets, and AI (like OpenAI or IBM Granite) to solve a real-world problem. It also shows how such tools can be expanded further by adding real-time data like weather, hotel booking, and maps.
- Overall, this was a fun and useful project that introduced me to the power of AI in the travel domain and gave me hands-on experience with practical technologies like Python, and cloud APIs.

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# FUTURE SCOPE

- Real-Time API Integration
- IBM Granite Integration
- Multilingual Support
- Sustainable Travel Suggestions
- Climate Smart Travel Tips

# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



Munagavalasa Venkata Sai Keerthika

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 22, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/11cf4361-f8dc-480d-be6c-1af1f1d8f276>



In recognition of the commitment to achieve  
professional excellence



Munagavalasa Venkata Sai Keerthika

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 23, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/98bd4a38-14e4-4bc1-8e61-c849bd4bb16d>



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Munagavalsa Venkata Sai Keerthika

for the completion of


**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 25 Jul 2025 (GMT)

**Learning hours:** 20 mins



Git hub link : <http://github.com/keerthika-2005-del/Watsonx-Travel-Agent/tree/main>



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## GITHUB LINK

<https://github.com/keerthika-2005-del/Watsonx-Travel-Agent/blob/main/README.md>



**THANK YOU**