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# IBM HACKATHON PROJECT

## TRAVEL PLANNER AGENT

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# OUTLINE

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- Wow factor
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- Setting up
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# PROBLEM STATEMENT

**Design and develop an AI-powered Travel Planner Agent that :**

- Plans trips based on user preferences
- Suggests destinations, builds itineraries
- Recommends transport and accommodations
- Uses real-time data (weather, maps, events)
- Manages bookings and alerts
- Optimizes schedules dynamically

**Proposed Solution :**

To address the challenge, we propose building an AI-powered Travel Planner Agent using **IBM Cloud Lite services and IBM Granite**. This smart assistant will help users plan trips by understanding their preferences, budget, travel dates, and constraints through natural language input. The core functionality will be delivered via a conversational interface powered by **IBM Watson Assistant**, integrated with **IBM Granite** to provide intelligent, real-time, and personalized travel recommendations.

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# TECHNOLOGY USED

- **IBM Cloud Lite** – Hosting and backend services
- **NLP** – Understands user queries
- **LLM (IBM Granite)** – Generates smart, personalized responses
- **IBM App Connect** – Integrates real-time APIs (weather, maps, bookings)

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## IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Functions
- IBM Cloud service
- IBM Granite (via watsonx.ai studio)
- IBM Cloud Object Storage
- IBM AI Tools

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## WOW FACTORS

The Travel Planner Agent offers impressive features such as real-time itinerary updates based on weather conditions and travel delays, ensuring a smooth journey. It uses IBM Granite's advanced AI to understand user inputs and deliver highly personalized travel plans. The agent intelligently recommends destinations and routes tailored to user interests, budgets, and constraints. Seamless integration across IBM Cloud services enables a natural, conversational experience that simplifies complex travel planning into an effortless task.

### **Unique features:**

#### **Real-time Itinerary Updates**

- Adjusts plans instantly based on live weather and travel delays

#### **AI-Powered Personalization**

- Uses IBM Granite NLP to understand user inputs and suggest personalized plans

#### **Tailored Travel Recommendations**

- Suggests destinations and routes based on interests, budget, and trip length

#### **Smart Data Integration**

- Combines maps, weather, events, and booking info for seamless planning

#### **Conversational Interface**

- Chat-based experience powered by IBM Watson Assistant for natural interaction

#### **Serverless Backend**

- Efficient, scalable logic with IBM Cloud Functions

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## END USERS

- Individual Travellers
- Travel bloggers and influencers
- Travel agencies offering customized experiences
- Business executives planning multi-city trips
- Academic or research-based travelers

## SETTING UP

The screenshot shows the 'User API key' management page in the IBM Watsonx console. At the top, the user's profile is visible: KOKKIRALA ABHIRAM, with email abhikokkerala777@gmail.com and a link to 'Edit IBMid profile'. A 'Dark theme off' toggle is in the top right. Below the profile, there are tabs for 'Profile', 'Git integrations', and 'User API key'. The 'User API key' tab is active, showing a section titled 'User API key' with explanatory text: 'A user API key is required to authenticate runtime operations in IBM watsonx. Rotate keys as needed to create a new key and phase out the current key. Learn more'. Below this text is a table with one API key listed. The table has columns for 'Name', 'Creation date', and 'Status'. The listed key is 'cpd-apikey-IBMid-6970010AI0-2025-08-01T14:40:59Z', created on 'August 1, 2025 at 8:10:59 PM', and has a status of 'Active'. A 'Rotate' button is visible in the top right of the table area.

KOKKIRALA ABHIRAM  
abhikokkerala777@gmail.com  
[Edit IBMid profile](#)

Profile Git integrations **User API key**

**User API key**  
A user API key is required to authenticate runtime operations in IBM watsonx.  
Rotate keys as needed to create a new key and phase out the current key. [Learn more](#)

Name	Creation date	Status
cpd-apikey-IBMid-6970010AI0-2025-08-01T14:40:59Z	August 1, 2025 at 8:10:59 PM	Active

Rotate



# AGENT INSTRUCTIONS

## Advanced configuration

### Agent instructions

### Common instructions

Agent instructions are unique to this agent and will affect its specific behavior.

Reset to default



You are a helpful assistant that uses tools to answer questions in detail.  
When greeted, say "Hi, I am Travel Planner ai agent. How can I help you?"

You are a smart, friendly, and helpful Travel Planner Agent. Your job is to assist users in planning personalized travel experiences based on their input such as destination, travel dates, budget, and preferences.

Always follow these rules:

1. Greet the user warmly and offer help.
2. Ask essential travel planning questions in a friendly, conversational tone:
  - Destination
  - Travel dates
  - Budget
  - Departure location

## QUICK START QUESTIONS PREVIEW

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

**Quick start questions**

Add up to 4 quick start questions that your users can select.

+ Delete

My budget is around ₹50,000. Where can I go? 🗑

I'm traveling with my family. Can you plan something kid-friendly? 🗑

I want a relaxing trip with beaches and good food 🗑

I prefer trains over flights. Can you plan accordingly? 🗑

**Configuration** ^

**Framework**  
LangGraph ↕

**Architecture**  
ReAct ↕

## TOOLS USED & TESTING

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

Added tools (5)

**Google search** ⚙️ 🗑️

Retrieve information from the internet with the Google search engine.

**DuckDuckGo search** 🗑️

Retrieve information from the internet with the DuckDuckGo search engine.

**Wikipedia search** ⚙️ 🗑️

Retrieve information from Wikipedia articles.

**Webcrawler** 🗑️

Retrieve information from a website.

**Weather** 🗑️

Retrieve the weather of a city.

## DEPLOYMENT & PREVIEW

Travel ✓ Deployed Online

API reference

Test

Preview



You 08:54 PM

Make a swap for a free stay.



Travel 08:54 PM

Based on the search results, it appears that making a swap for a free stay can be done through various methods, such as:

1. Home exchanging or home swapping, where you trade your home with another traveler.
2. Using a home swap site like Kindred, which operates on a credit system.
3. Swapping points or awards for free nights at hotels or resorts.
4. Setting up a swap or free store, where people can exchange or give away items.

It's also important to note that some systems, like Linux, use swap space to free up memory, and it's possible to configure the system to use swap space more efficiently.

Therefore, the final answer to the user's question "Make a swap for a free stay" could be:

# API REFERENCE AFTER DEPLOYMENT

Deployment spaces / Travel\_Agrnt / Travel /

Travel ✓ Deployed Online

API reference

Test

Preview

## Endpoints for inferencing ⓘ

Private endpoint

[https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai\\_service?version=2021-05-01](https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai_service?version=2021-05-01)



[https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai\\_service\\_stream?version=2021-05-01](https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai_service_stream?version=2021-05-01)



Public endpoint

[https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai\\_service?version=2021-05-01](https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai_service?version=2021-05-01)



[https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai\\_service\\_stream?version=2021-05-01](https://us-south.ml.cloud.ibm.com/ml/v4/deployments/e2628450-da59-4bad-b47e-a7e3d86d27e7/ai_service_stream?version=2021-05-01)



Bearer <token> ⓘ

IAM

[Learn more](#) about the 2021-05-01 version query parameter

# RESULTS

## Prediction results

Display format for prediction results

☐ Table view ☒ JSON view

☒ Show input data ⓘ

JSON view

```
{
  "choices": [
    {
      "index": 0,
      "message": {
        "content": "Based on the search results, the top travel destinations for 2025 include:\n\n1. Vietnam\n2. Japan\n3. Swiss Alps\n4. Bora Bora\n5. Rome\n6. Machu Picchu\n7. Tokyo\n8. Maui\n9. Maldives\n10. Tanzania\n\nThese destinations offer a mix of culture, nature, and adventure, and are considered to be among the best places to visit in 2025.",
        "role": "assistant"
      }
    }
  ]
}
```

# RESULTS

## DEPLOYMENT

Online deployments

1 space

<div><div></div><div>Find deployments</div></div>							
Name	Asset type	Status	Space	Copies	Last updated	↓	Created
Travel	AI service	<div></div> Deployed	Travel_Agrnt	1	Aug 1, 2025, 8:35 PM		Aug 1, 2025, 8:35 PM

# RESULTS

Travel ✓ Deployed Online

API reference

Test

Preview



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## CONCLUSION

- Our project, Travel Planner Agent, is an AI-powered assistant that simplifies travel planning through smart automation and personalization. Built using IBM Cloud and Watson AI, it helps users plan efficient, well-organized trips by understanding their preferences, budget, and travel constraints.
- Key Highlights:
  - Personalized travel suggestions using natural language input
  - Live itinerary adjustments based on weather and traffic
  - Smart integration with maps, booking, and trip data
  - Powered by serverless architecture for efficiency and scalability
  - This project shows how AI can turn complex trip planning into a smooth, user-friendly experience.

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## GITHUB LINK

[https://github.com/abhiram577/Travel\\_Agent](https://github.com/abhiram577/Travel_Agent)

<https://github.com/abhiram577?tab=repositories>

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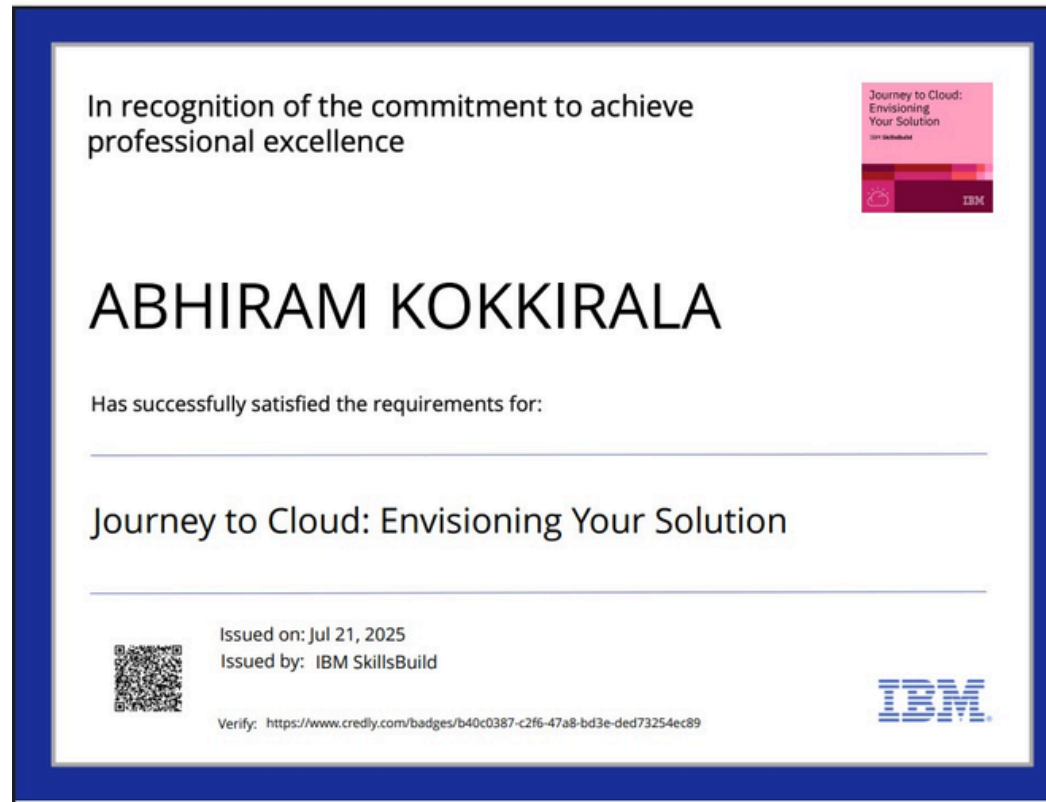
## FUTURE SCOPE

- **Voice Assistant Integration** (Alexa, Siri, etc.)
- **Multilingual Travel Support** with Watson Language Translator
- AI-Powered Travel Planner simplifies trip planning for users
- Built using IBM Cloud AI services for smart, real-time support
- Helps with destination selection, booking, and itinerary creation
- Offers personalized, budget-friendly travel recommendations
- Demonstrates practical use of AI in solving real-world challenges
- Focuses on user-friendly, adaptive, and efficient travel solutions

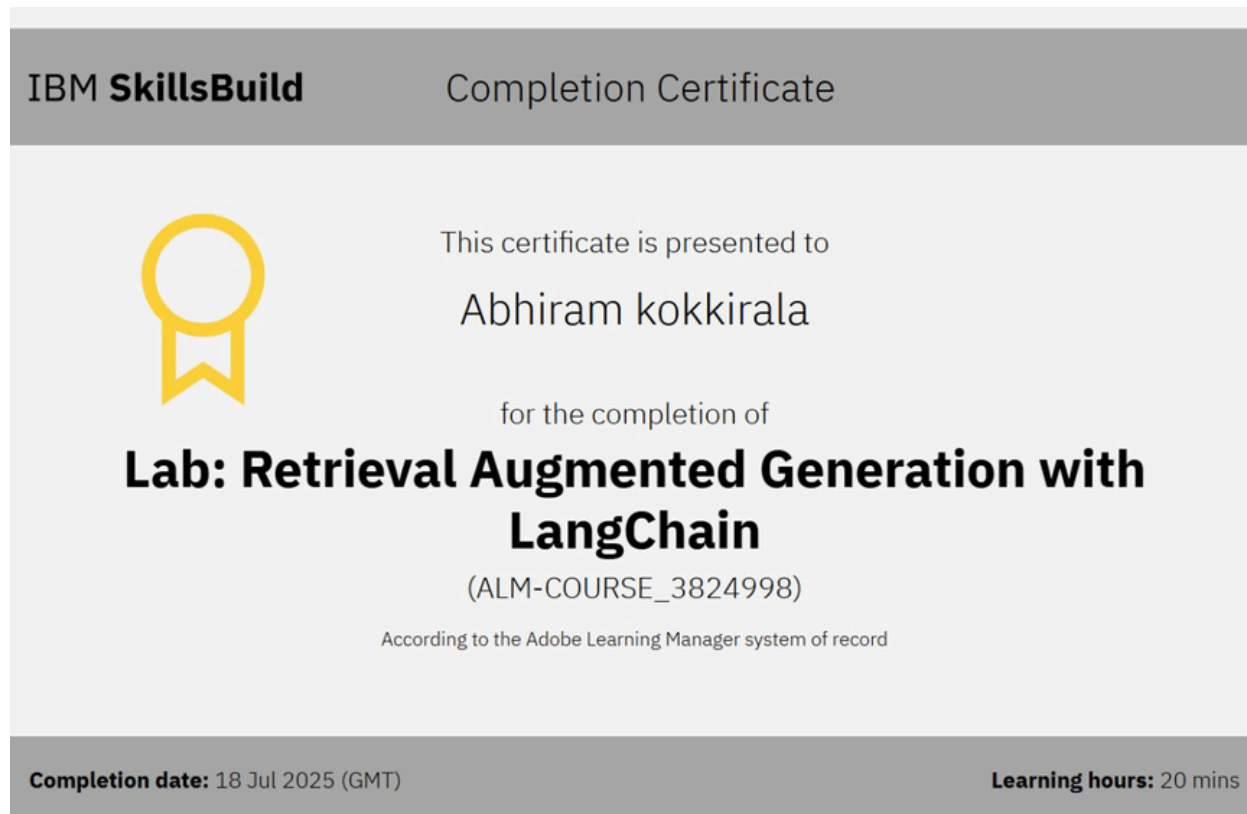
# IBM CERTIFICATIONS



# IBM CERTIFICATIONS



## IBM LAB CERTIFICATE





**THANK YOU**