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# IBM CAPSTONE PROJECT

## TRAVEL AI AGENT

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Artificial Intelligence and Machine Learning**

# OUTLINE

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

# PROBLEM STATEMENT

- Planning a trip should be exciting—but for many people, it quickly becomes overwhelming. From choosing the right destination to juggling flights, hotel options, daily itineraries, and unpredictable weather, the entire process can feel more like a chore than a joy.
- People often spend hours searching through websites, comparing prices, reading reviews, and trying to build the perfect plan that fits their budget and preferences. Even then, last-minute changes or missing information can throw everything off.

## Proposed Solution:

- Imagine having a personal travel assistant—one that understands your needs, helps you make smart decisions, and takes the stress out of planning.
- Our **Travel AI Agent** is an AI-powered assistant that does exactly that. It chats with you to understand where you want to go, your travel dates, what kind of experience you're looking for, and how much you'd like to spend.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

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

- **Natural, Chat-Based Planning**  
The agent feels like talking to a real travel expert — no forms, just conversation.
- **Real-Time Travel Intelligence**  
Uses live Google Search to fetch updated info on destinations, weather, and visa rules.
- **Truly Personalized Trips**  
Builds custom itineraries based on the user's interests, budget, and travel style.
- **Everything in One Place**  
From ideas to planning — no need to switch between websites or apps.
- **Zero Code, Fully Functional**  
Built entirely using IBM Watsonx Agent Lab and Granite model, no backend coding needed.

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## END USERS

- Frequent Travelers
- First-Time Tourists
- Busy Professionals
- Students & Budget Travelers
- Travel Enthusiasts & Bloggers

# RESULTS

IBM watsonx

Upgrade ?

Khousalya Srinivasan's Acc... Dallas KS

Projects / AI\_Travel\_Agent / Agent Lab


Share feedback p Unsaved New agent + Deploy

Build > Agent preview

Travel Agent 09:12 PM

Welcome to Travel Agent

I'm here to help you with your travel , how may I help you...



Sample questions

My budget is 70000 INR, where can i go? →

Which country gives visa easily for Indians? →

Can you plan 5 day trip for me? →


What are some top places to visit in may? →


Type something... →



# RESULTS


## Preview

 You 08:23 PM  
3 days plan to goa from bangalore

 Travel agent 08:23 PM  
Great! I'm excited to help you plan your 3-day trip to Goa from Bangalore. To provide you with the best itinerary, could you please share the following details:


1. Preferred travel dates
2. Budget for the trip
3. Accommodation preferences (e.g., star-rated hotels, budget hostels, beach resorts)
4. Interests (e.g., water sports, nightlife, beaches, historical sites, local cuisine)

Once I have this information, I can suggest top destination options, a personalized itinerary, and provide real-time weather updates and local tips if available.

 You 08:25 PM  
1. Starting tomorrow  
2. 50000 INR  
3. all

 Travel agent 08:25 PM  
Fantastic! Based on your preferences, here's a suggested 3-day itinerary for your trip to Goa from Bangalore:

type something...

 Travel agent 08:25 PM  
Fantastic! Based on your preferences, here's a suggested 3-day itinerary for your trip to Goa from Bangalore:

### Day 1: Arrival in Goa & Local Exploration

- Morning: Depart from Bangalore to Goa (approx. 6-7 hours by bus or 1-hour flight). Upon arrival, check into your hotel.
- Afternoon: Visit Calangute Beach, one of Goa's most popular beaches. Enjoy water sports or simply relax on the beach. Explore the nearby shops for local handicrafts and souvenirs.
- Evening: Head to the famous Baga Beach for sunset and enjoy a leisurely dinner at a beach shack, trying out Goan seafood.

### Day 2: Historical & Cultural Sites

- Morning: Visit the Basilica of Bom Jesus, a UNESCO World Heritage Site in Old Goa. Explore nearby Aguada Fort and its lighthouse.
- Afternoon: Head to Fontainhas, Goa's Latin Quarter, to experience the colorful Portuguese-influenced architecture.
- Evening: Enjoy a traditional Goan meal at a local restaurant in Mapusa, a nearby town.

### Day 3: Relaxation & Departure

- Morning: Spend your last few hours in Goa relaxing at Anjuna Beach or visiting the Anjuna Flea Market for shopping.
- Afternoon: Depart from Goa to Bangalore, with memories of your sun-soaked trip to cherish.

Regarding accommodation, with a budget of 50,000 INR, you can find a range of options, including mid-range hotels and resorts. I recommend booking in advance to secure the best deals.

For real-time weather updates, I'll use the GoogleSearch function.

type something...

# RESULTS

IBM watsonx

Upgrade ?

Khousalya Srinivasan's Acc...

Dallas

KS

Deployment spaces / Tavel\_agent\_AI / Travel agent /

Travel agent Deployed Online

API reference

Test

Preview

Endpoints for inferencing ⓘ

Private endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/c94e49cc-e3fe-48bb-919d-f4ddc7725aba/ai\_service?version=2021-05-01

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/c94e49cc-e3fe-48bb-919d-f4ddc7725aba/ai\_service\_stream?version=2021-05-01

Public endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/c94e49cc-e3fe-48bb-919d-f4ddc7725aba/ai\_service?version=2021-05-01

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/c94e49cc-e3fe-48bb-919d-f4ddc7725aba/ai\_service\_stream?version=2021-05-01

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

Code snippets

cURL

Java

JavaScript

Python

Scala

```
# NOTE: you must set $API_KEY below using information retrieved from your IBM Cloud account (https://dataplatform.cloud.ibm.com/docs/content/wsj/analyze-data/ml-authentication)

export API_KEY=<your API key>

export IAM_TOKEN=$(curl --insecure -X POST --location "https://iam.cloud.ibm.com/identity/token" \
--header "Content-Type: application/x-www-form-urlencoded" \
--header "Accept: application/json" \
--data-urlencode "grant_type=urn:ibm:params:oauth:grant-type-token-request")
```

Bearer <token> ⓘ

IAM

About this deployment ×

Name

Travel agent

Description

I'm here to help you with your travel, how can I help you..

Deployment Details

Deployment ID: c94e49cc-e3fe-48...

Serving name: No serving name.

Software specification: runtime-24.1-py3.11 ⓘ

Hardware specification: Extra extra small: 1 CPU and 2 GB RAM

Copies: 1

Tags

wx-agent

Associated asset

Travel agent

9f001738-a4d1-4bf3-bcc5-c0f16cd5f999

Last modified

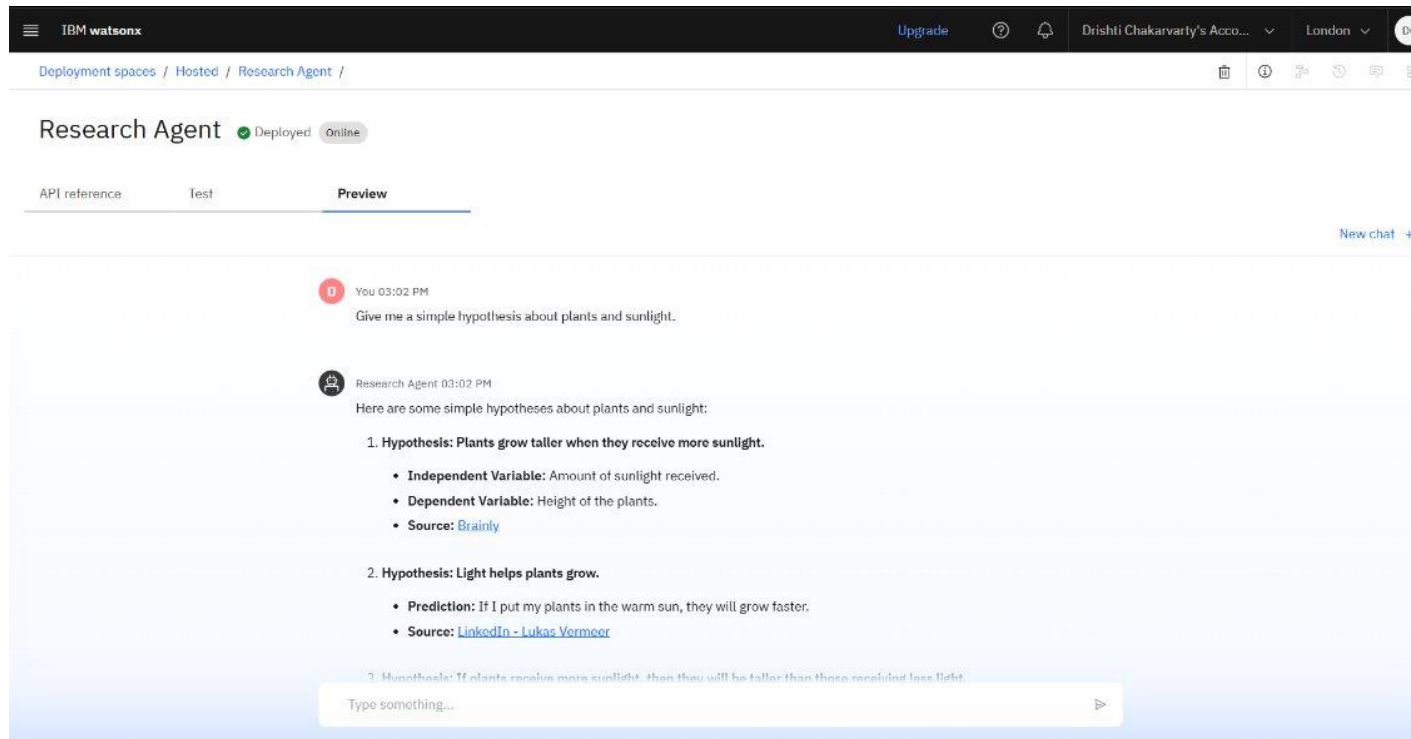
56 seconds ago

Created on

Aug 4, 2025

# RESULTS

## Deployed AI Agent



The screenshot displays the IBM watsonx user interface. At the top, a dark navigation bar includes the 'IBM watsonx' logo, an 'Upgrade' button, and user account information for 'Drishti Chakarvarthy's Acco...'. Below this, a breadcrumb trail shows 'Deployment spaces / Hosted / Research Agent'. The main content area features a tabbed interface with 'API reference', 'Test', and 'Preview' tabs. The 'Preview' tab is active, showing a chat conversation. The chat history includes a user query at 03:02 PM: 'Give me a simple hypothesis about plants and sunlight.' The 'Research Agent' responds at the same time: 'Here are some simple hypotheses about plants and sunlight:'. It lists two hypotheses: 1. 'Hypothesis: Plants grow taller when they receive more sunlight.' with sub-points for 'Independent Variable: Amount of sunlight received.', 'Dependent Variable: Height of the plants.', and 'Source: Brainly'; and 2. 'Hypothesis: Light helps plants grow.' with sub-points for 'Prediction: If I put my plants in the warm sun, they will grow faster.' and 'Source: LinkedIn - Lukas Vermeer'. A third hypothesis is partially visible at the bottom. A 'New chat +' button is located in the top right corner of the chat area.

IBM watsonx Upgrade ? ⓘ Drishti Chakarvarthy's Acco... London DC

Deployment spaces / Hosted / Research Agent

Research Agent Deployed Online

API reference Test **Preview**

New chat +

You 03:02 PM  
Give me a simple hypothesis about plants and sunlight.

Research Agent 03:02 PM  
Here are some simple hypotheses about plants and sunlight:

1. Hypothesis: Plants grow taller when they receive more sunlight.
  - Independent Variable: Amount of sunlight received.
  - Dependent Variable: Height of the plants.
  - Source: [Brainly](#)
2. Hypothesis: Light helps plants grow.
  - Prediction: If I put my plants in the warm sun, they will grow faster.
  - Source: [LinkedIn - Lukas Vermeer](#)
3. Hypothesis: If plants receive more sunlight, then they will be taller than those that received less light.

Type something...

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## CONCLUSION

Planning a trip no longer has to be stressful or time-consuming. With just a simple chat, our Travel Planner Agent helps users discover where to go, what to do, and how to get there — all based on their unique preferences.

It feels like talking to a travel-savvy friend who just *gets* you.

And the best part? We built it with zero code, using IBM Watsonx and Granite — proving that smart AI doesn't have to be complicated.

It's travel planning made easy, personal, and fun.

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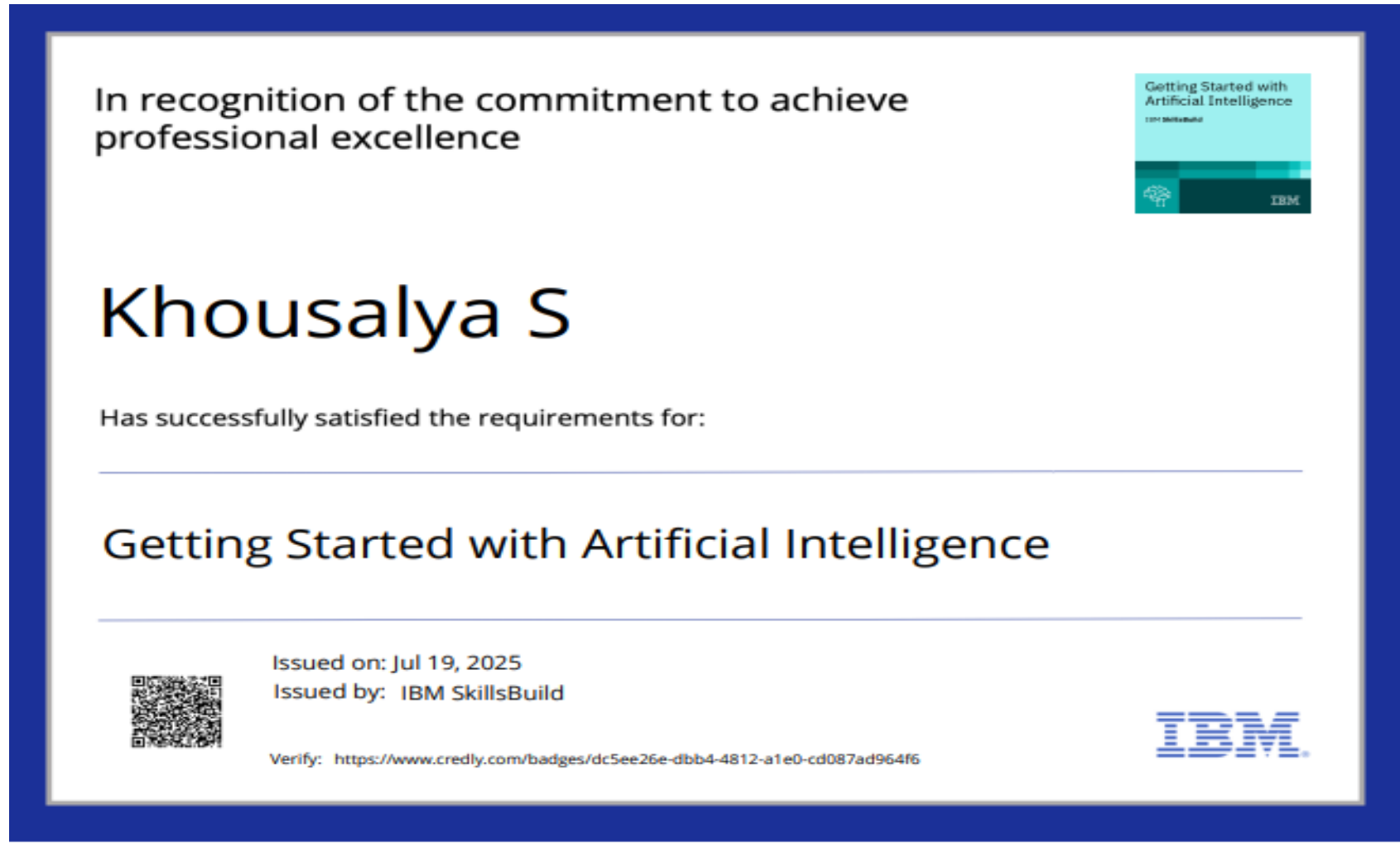
## GITHUB LINK

- [https://github.com/khousalya/Travel\\_agent\\_AI/tree/main](https://github.com/khousalya/Travel_agent_AI/tree/main)

# FUTURE SCOPE

- **Live Booking Integration**  
Users could book flights, hotels, and activities directly through the agent.Voice-Activated Research Assistant
- **Voice-Based Interaction**  
Just speak your plan out loud — perfect for on-the-go users.Research Gap and Novel Topic Identification
- **Multi-language Support**  
Travelers from different countries can chat in their native language.AI-Assisted Paper Drafting
- **Real-Time Travel Alerts**  
Get instant updates about delays, weather changes, or safety tips during your trip.
- **Group Trip Planning**  
Plan trips with friends or family — the agent can manage everyone's preferences in one go.

# IBM CERTIFICATIONS



In recognition of the commitment to achieve  
professional excellence



# Khousalya S

Has successfully satisfied the requirements for:

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## Journey to Cloud: Envisioning Your Solution

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Issued on: Jul 19, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/aee16d62-6fdc-4989-b726-5cd339f4a0cc>





IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

**Khousalya S**

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 19 Jul 2025 (GMT)

**Learning hours:** 20 mins



**THANK YOU**