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# CAPSTONE PROJECT

## PROJECT TITLE

**Presented By:**

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# OUTLINE

- Problem Statement
- Proposed System/Solution
- System Development Approach
- Result
- Conclusion
- Future Scope
- References

# PROBLEM STATEMENT

Travel planning is often time-consuming and complex, involving decisions about destinations, accommodations, transport, budget, and weather. So we need to create a Travel Planner Agent which 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. This smart assistant transforms complex travel planning into a seamless, enjoyable process.

# PROPOSED SOLUTION

- The proposed system provides an AI-powered Travel Planner Agent built using IBM Watsonx.ai. It automates and simplifies the trip planning process through the following features:
- User-Centered Interaction:
  - Understands user inputs such as travel destination, budget, duration, preferences (e.g., mountains, beaches, cultural).
- 2 Quick Start Options:
  - Suggest trendy destination
  - Plan based on your preferences
- AI Foundation Model Integration:
  - Uses a pre-trained foundation model to generate intelligent, human-like responses and suggestions.

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- **Simulated Real-Time Responses:**

- **Generates context-aware and up-to-date recommendations (weather, activities, cost breakdown) .**

- **Itinerary Generation:**

- **Creates a full-day itinerary based on input constraints and destination, tailored for solo, couple, or group travelers.**

- **Deployed on IBM Cloud:**

- **Entire agent is built and deployed on Watsonx.ai within IBM Cloud Lite, using Cloud Object Storage and runtime services**

# SYSTEM APPROACH

- System requirements
  - Laptop
  - Internet Connection
  - Cloud Requirements:
    - IBM Cloud account (Lite Plan – Free Tier)
    - Active Cloud Object Storage instance
    - Watsonx.ai service (foundation model access)
    - Runtime service linked to the project

# RESULT

Agent Lab (beta) — Docs | IBM x Travel Planner Agent — travel\_ x +

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Projects / travel\_planner\_project / Travel Planner Agent Share feedback β Autosaved 3:58 PM New agent + Deploy

## Build

AI Model: llama-3-3-70b-instruct

### Instructions

[Advanced configuration](#)

You are an intelligent Travel Planner AI Assistant. You handle two kinds of user queries option 1 and option 2 and if the user provides any preferences in any form (like place name etc) switch to Option 2 below.

Option 1: Suggest a trendy place

When the user selects "Suggest a trendy place" Suggest 2–3 trending places based on the current season or recent travel popularity - not lists.

For each place Provide:

1. Why the place is popular
2. Best time to visit
3. Key attractions
4. Local activities or foods
5. Example costs

Option 2: Plan travel according to the preferences

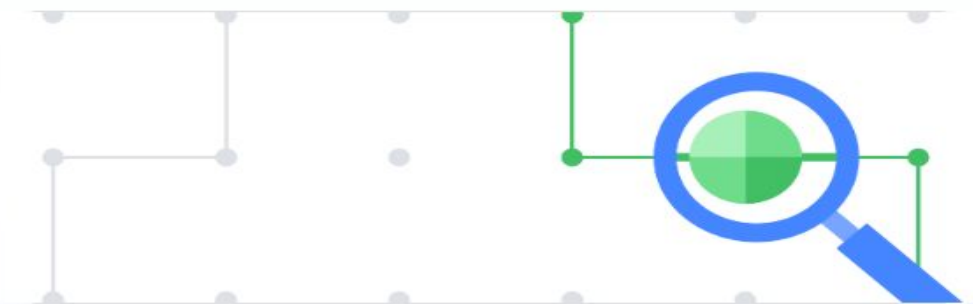
If option 2 is chosen Ask the user for:

1. Destination (or suggest options if they haven't picked)
2. Travel dates
3. Budget
4. Trip type (solo, family, group, etc.)
5. Preferences (nature, food, adventure, etc.)

## Agent preview

### Welcome to Travel Planner Agent

Travel Planner Agent helps user plan trips efficiently and intelligently.



### Sample questions

Suggest a trendy place → Plan travel according to the preferences →

Type something... Activate Windows Go to Settings to activate Windows.

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# travel\_agent

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Name	Last modified	
🤖 Travel Planner Agent	3 minutes ago Modified by you	⋮



review



You: 03:28 PM

Plan travel according to the preferences



Travel Planner Agent 03:28 PM

To plan travel according to the preferences, I need to know more details. Could you please provide me with the following information:

1. Destination (or would you like me to suggest some options?)
2. Travel dates
3. Budget
4. Trip type (solo, family, group, etc.)
5. Preferences (nature, food, adventure, etc.)

Once I have this information, I can start building a personalized travel plan for you.

► How did I get this answer?

Type something...

Activate Windows  
Go to Settings to activate Windows.



You: 03:28 PM

manali 2july to 4 july \$300 solo nature



Travel Planner Agent 03:28 PM

Based on your preferences, I've planned a 3-day trip to Manali from July 2nd to July 4th. Here's your personalized travel plan:

Day 1: July 2nd

- Morning: Arrive in Manali and check-in to a budget-friendly hotel like the Hotel Manali Inn or similar (cost: \$20 per night)
- Afternoon: Visit the Hadimba Devi Temple, a beautiful wooden temple surrounded by lush green forests (entry fee: \$1)
- Evening: Take a stroll along the Mall Road, explore the local market, and try some street food (cost: \$5-10)

Day 2: July 3rd

- Morning: Take a bus to the Solang Valley (cost: \$5-10) and enjoy activities like paragliding, zip-lining, or horse riding (cost: \$20-50)
- Afternoon: Visit the Rohtang Pass (entry fee: \$10) - a scenic spot with breathtaking views of the Himalayas

Type something...

Activate Windows  
Go to Settings to activate Windows.

review

Day 3: July 4th

- Morning: Trek to the Jogini Falls (free entry), a beautiful waterfall surrounded by lush green forests
- Afternoon: Visit the Vashisht Temple (entry fee: \$1) and take a dip in the hot springs (cost: \$2-5)
- Evening: Depart from Manali

Transportation:

- Take a bus from Delhi to Manali (cost: \$10-20) or a flight from Delhi to Bhuntar (cost: \$50-100) and then take a taxi to Manali (cost: \$10-20)

Food:

- Try some local cuisine like momos, thukpa, and trout fish (cost: \$5-10 per meal)
- Visit the local market and try some street food (cost: \$5-10)

Budget Breakdown:

- Accommodation: \$60 (avg. \$20 per night)
- Transportation: \$20-100 (depending on the mode of transport)

Type something...

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- Transportation: \$20-100 (depending on the mode of transport)
- Food: \$50-100 (avg. \$16-33 per day)
- Activities: \$50-100 (avg. \$16-33 per day)
- Total: \$180-360

This plan should fit your budget of \$300 and provide you with a mix of nature, adventure, and local culture. However, please note that the costs are estimates and can vary depending on your personal preferences and exchange rates.

**Local Weather Update:** The weather in Manali in July is usually pleasant with temperatures ranging from 15-25°C (59-77°F). However, it's always a good idea to pack layers and be prepared for unexpected rain showers.

**Travel Advisory:** Please be aware of the local customs and traditions, and respect the environment and wildlife. Also, make sure to stay hydrated and take necessary precautions against altitude sickness.

**Booking Advice:** You can book your accommodation and transportation in advance through websites like Booking.com, MakeMyTrip, or IRCTC. It's also a good idea to book your activities and tours through local operators to get the best prices.

I hope you enjoy your trip to Manali!

► How did I get this answer?

Type something...

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Build AI Model: llama-3-3-70b-instruct ⚙️ ⏪

Setup ▾

Configuration ▴

Framework LangGraph ▾

Architecture ReAct ▾

Instructions Advanced configuration

You handle two kinds of user queries:  
Option 1: Suggest a trendy place  
When the user selects "Suggest a trendy place" Suggest 2-3 trending places based on the current season or recent travel popularity - not lists.  
For each place Provide:

Knowledge ▾

Tools ▴

Agent preview

SM You: 02:43 PM

Suggest a trendy place

Travel Planner Agent 02:43 PM

Based on the search results, here are a few trendy places to consider traveling to:

1. **Alaska:** Known for its breathtaking natural beauty, Alaska is a popular destination for outdoor enthusiasts. The best time to visit is during the summer months when the weather is mild and the days are long. Key attractions include Denali National Park, the Northern Lights, and wildlife viewing opportunities. Local activities include hiking, fishing, and dog sledding. Example costs include \$1,000-\$2,000 per person for a 7-day cruise.

2. **Iceland:** With its unique landscapes and geothermal hot springs, Iceland is a trendy destination for travelers. The best time to visit is during the summer months when the weather is mild and the days are long. Key attractions include the Blue Lagoon, Gullfoss waterfall, and the Golden Circle. Local activities include hiking, glacier hiking, and snorkeling. Example costs include \$1,500-\$3,000 per person for a 7-day trip.

3. **Thailand:** Known for its delicious cuisine and beautiful beaches, Thailand is a

edunet  
foundation

# CONCLUSION

- Challenges Faced
  - Delays in provisioning Cloud Object Storage (COS)
  - Watsonx.ai interface loading issues
  - Sandbox tool limitations (no API integration)
  - Simulating real-time data without live sources
  - LLM Response Inconsistency
- Conclusion
  - Despite these challenges the AI Travel Planner Agent was successful and simplifies and automates the entire trip-planning process. By simulating real-time responses and understanding user constraints, it creates personalized and efficient itineraries. This project demonstrates how AI can enhance everyday experiences using IBM's Watsonx.ai tools.



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# FUTURE SCOPE

- **Integration with Real-Time APIs** - Connect with live APIs for maps, weather forecasts, hotel bookings, and flight data to offer real-time planning.
- **Voice-Based Interaction** - Add voice input/output capabilities to make the agent more accessible and interactive for mobile users.
- **User Profile & History** - Save user preferences, past trips, and budgets to offer smarter, more personalized recommendations over time.
- **Multilingual Support** - Expand usability for global users by supporting multiple languages through translation APIs.
- **Mobile App Version** - Convert the agent into a full-fledged mobile app for travel planning on the go.
- **Offline Mode with Preloaded Data** - Allow basic suggestions and trip planning in offline mode using stored destination data.

# REFERENCES

- IBM Cloud Documentation-(<https://cloud.ibm.com/docs>)
- IBM Watsonx.ai agent builder guide-(<https://dataplatform.cloud.ibm.com>)
- AICTE Edunet IBM Internship Project Guidelines
- IBM Watsonx.ai Documentation-(<https://www.ibm.com/cloud/watsonx>)

# IBM CERTIFICATIONS



# IBM CERTIFICATIONS





# IBM CERTIFICATIONS

**IBM SkillsBuild** Completion Certificate



This certificate is presented to

**Shikha Mishra**

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**