
CAPSTONE PROJECT

SMART TRAVEL PLANNER

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OUTLINE

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PROBLEM STATEMENT

Planning a trip involves several time-consuming tasks such as researching tourist attractions, checking local weather, estimating budgets, finding hotels and restaurants, and creating day-wise itineraries. For many travelers—especially those unfamiliar with a destination—this process can be overwhelming and often leads to poor planning, missed experiences, or overspending. There is a need for an intelligent assistant that can provide relevant, personalized, and concise travel information in one place without requiring any coding or technical knowledge from the user.

PROPOSED SOLUTION

- This project presents an **AI-powered Travel Planner Agent** built using **IBM Watsonx.ai Studio** that acts as a conversational assistant to simplify the trip planning experience. The agent is designed to:
- Suggest real, interesting tourist destinations based on the user's location query.
- Provide clickable **Google Map** links to each suggested place.
- Answer queries about **food**, **accommodation**, and **approximate costs** only when specifically asked.
- Include **weather information** for the target destination upon request.

TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

IBM Cloud Service used

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

WOW FACTORS

Context-Aware Responses

- The agent understands user intent and **responds differently** based on how a question is asked.
- Example: If asked for a “5-day tour plan,” it gives only the itinerary; if asked for **cost, food, or hotel**, it provides detailed information **only then**—keeping replies relevant and clutter-free.

Instant Google Maps Integration

- Every place suggestion includes a **clickable Google Maps link**, making it easy for users to explore locations right away without searching manually.

On-Demand Weather Info

- Users can ask about the **current or general weather** of any location, and the agent delivers helpful, location-based weather updates.

Food and Hotel Insights

- The agent recommends **local cuisines**, available restaurants, and **hotel options**—complete with approximate **cost ranges** and **location links**.

Fully No-Code AI Agent

- The entire solution is built using **IBM Watsonx.ai**, requiring **no coding**, making it easy to maintain, extend, or replicate.

END USERS

- Casual Travelers & Tourists
- Busy Professionals
- Student & Young explorers
- Travel Agencies

RESULTS

IBM watsonx

Upgrade ?

Subhasish Ghoshal's Acco... Dallas SG

Projects / Travel_project / Smart Travel planner

Share feedback Autosaved 6:27 PM New agent + Deploy

Build

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

Configuration

Framework

LangGraph

Architecture

ReAct

Instructions

location or places then include those details.

If the user asks for a tour plan (e.g., "Give me a 5-day plan from Kolkata to Goa"), give only the itinerary, not the cost or detailed locations unless explicitly asked.

Knowledge

Tools

Add a tool Create custom tool

Added tools (5)

Agent preview

SG You: 06:26 PM

I'm planning a 5-day trip from Kolkata to Goa. Can you give me a tour plan with major attractions? Also, what's the typical weather in Goa in August? And if possible, tell me the average hotel rent and food cost per day, and where I can stay and eat.

Smart Travel planner 06:26 PM

Sure, here's a simple 5-day itinerary for your trip from Kolkata to Goa:

Day 1 (Arrival in Goa):

- Arrive at Dabolim Airport, Goa.
- Check into your hotel in Panaji, the capital city, or in a beach area like Calangute or Baga.
- Spend the rest of the day relaxing and acclimating to the tropical climate.

Day 2:

- Visit Basilica of Bom Jesus, a UNESCO World Heritage Site.
- Explore Aguada Fort and its lighthouse.
- Enjoy a boat ride at the Aguada Harbour.

Day 3:

Type something...

edunet
foundation

Smart Travel planner ✓ Deployed Online

API reference

Test

Preview

S

You 10:43 PM

give me some popular street food option and cost along with thier location in kolkata

Smart Travel planner 10:43 PM

Smart Travel planner 10:43 PM

Here are some popular street food options in Kolkata, along with their estimated costs and locations:

1. 📍 Kolkata's Fuchka: Enjoy these crispy, tangy treats filled with potatoes, chickpeas, and tamarind chutney. You can find them almost everywhere, but try near College Street for the best experience. 📍 View on Map: <https://www.google.com/maps/search/College+Street,+Kolkata>
2. 📍 Kathi Rolls: These delicious wraps filled with spiced meat, onions, and chutneys are a must-try. Head to Park Street or Park Circus for the best Kathi Rolls in town. 📍 View on Map: <https://www.google.com/maps/search/Park+Street,+Kolkata>
3. 📍 Jhal Muri: A puffed rice dish tossed with potatoes, chickpeas, and a spicy sweet-and-sour sauce. It's a cheap and filling

Type something...



Deployed AI Agent

Smart Travel planner ✓ Deployed Online

API reference

Test

Preview

Endpoints for inferencing ⓘ

Private endpoint

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/80a69295-e155-478d-a1e1-c34c4cdcab96/ai_service?version=2021-05-01`

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/80a69295-e155-478d-a1e1-c34c4cdcab96/ai_service?version=2021-05-01`

Public endpoint

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/80a69295-e155-478d-a1e1-c34c4cdcab96/ai_service?version=2021-05-01`

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/80a69295-e155-478d-a1e1-c34c4cdcab96/ai_service?version=2021-05-01`

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

Code snippets

Bearer <token> ⓘ

IAM

CONCLUSION

The Travel Planner Agent built using IBM Watsonx.ai is a smart, user-friendly AI assistant that simplifies and personalizes the travel planning process. By understanding user queries and responding with clear suggestions, clickable map links, and context-aware details like food, hotel costs, and weather, it creates a smooth and engaging experience for travelers.

FUTURE SCOPE

Real-Time Booking Integration

- Connect with APIs from airlines, railways, and hotel platforms (like MakeMyTrip, IRCTC, Booking.com) to allow instant reservations directly through the chatbot.

Voice Assistant support

- Integrate with voice services (e.g., Google Assistant, Alexa) for hands-free travel planning and on-the-go interactions.

Budget Optimization Filter

- Automatically calculate the cheapest or most luxurious options based on a given budget, and provide smart itinerary suggestions accordingly.

User Account & History

- Allow users to create profiles, save past plans, and receive personalized destination recommendations based on their history and preferences.

IBM CERTIFICATIONS

Credly Certificate(getting started with AI)

In recognition of the commitment to achieve professional excellence



Subhasish Ghoshal

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 17, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/105abe1c-a773-40b2-b3c1-9a0084777edf>




RAG LAB Certificate

19/07/2025, 23:13

Completion Certificate | SkillsBuild

IBM SkillsBuild

Completion Certificate



This certificate is presented to

Subhasish Ghoshal

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

Credly Certificate(Journey to Cloud)

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professional excellence



Subhasish Ghoshal

Has successfully satisfied the requirements for:

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GITHUB LINK

<https://github.com/subhasish1-hub/Travel-Agent>



THANK YOU