CAPSTONE PROJECT

TRAVEL PLANNER AGENT

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edunet foundation

OUTLINE

- **Problem Statement**
- **Proposed System/Solution**
- **System Development Approach** (Technology Used)
- **Algorithm & Deployment**
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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.

PROPOSED SOLUTION

We propose an AI-powered Travel Planner Agent that automates and personalizes the trip planning process using IBM Granite (LLM) on IBM Cloud. The system intelligently suggests destinations, builds optimized itineraries, recommends accommodations and transport, and integrates real-time weather and travel updates.

- Personalized itineraries based on preferences
- Budget-conscious planning
- Real-time suggestions and alerts
- Simplified bookings and smooth travel experience

SYSTEM APPROACH

The Travel Planner Agent is developed **entirely on IBM Cloud Lite** using the following technologies:

Component	Technology Used
AI Logic	IBM Granite Foundation Models (watsonx.ai)
Development Environment	Watson Studio Notebooks
Data Storage	IBM Cloud Object Storage
Real-time Updates	IBM Weather APIs
Deployment	IBM Cloud Services

ALGORITHM & DEPLOYMENT

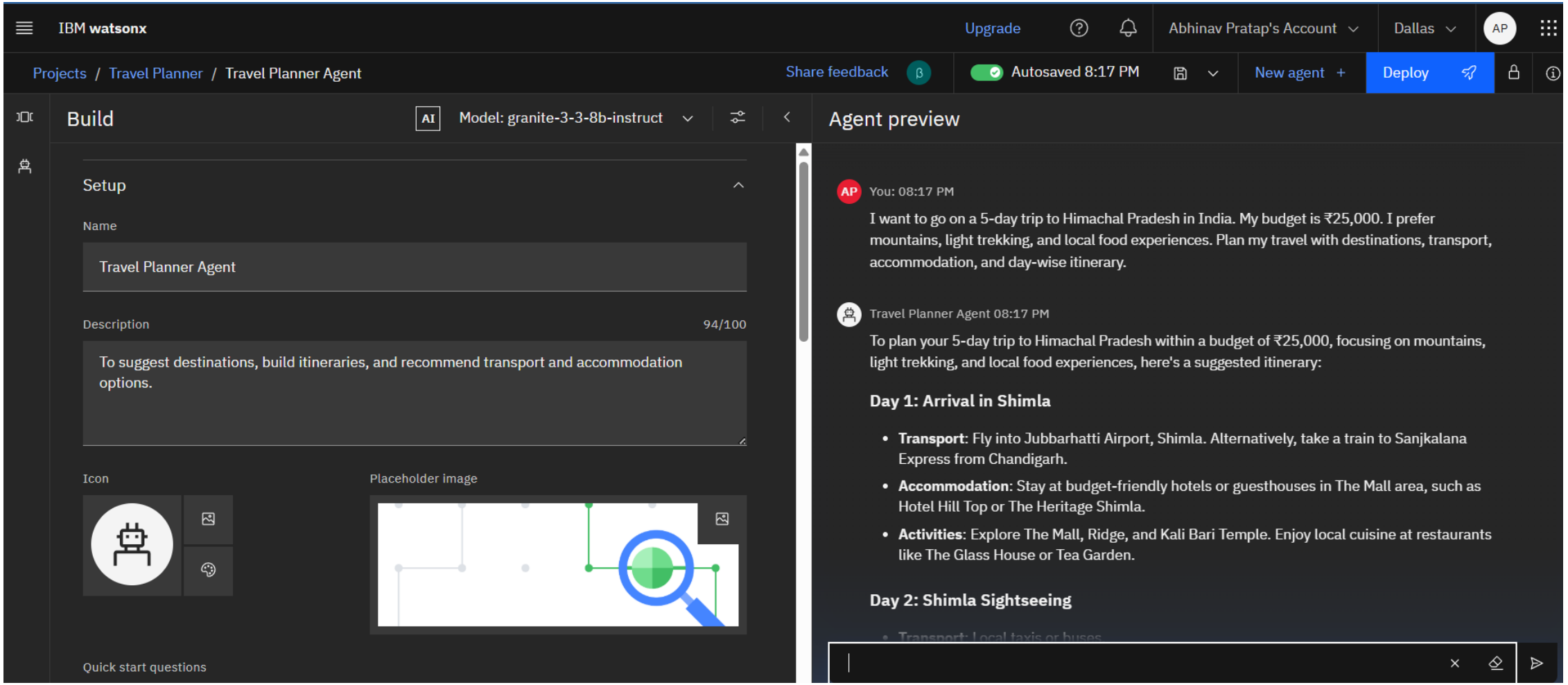
Algorithm Workflow:

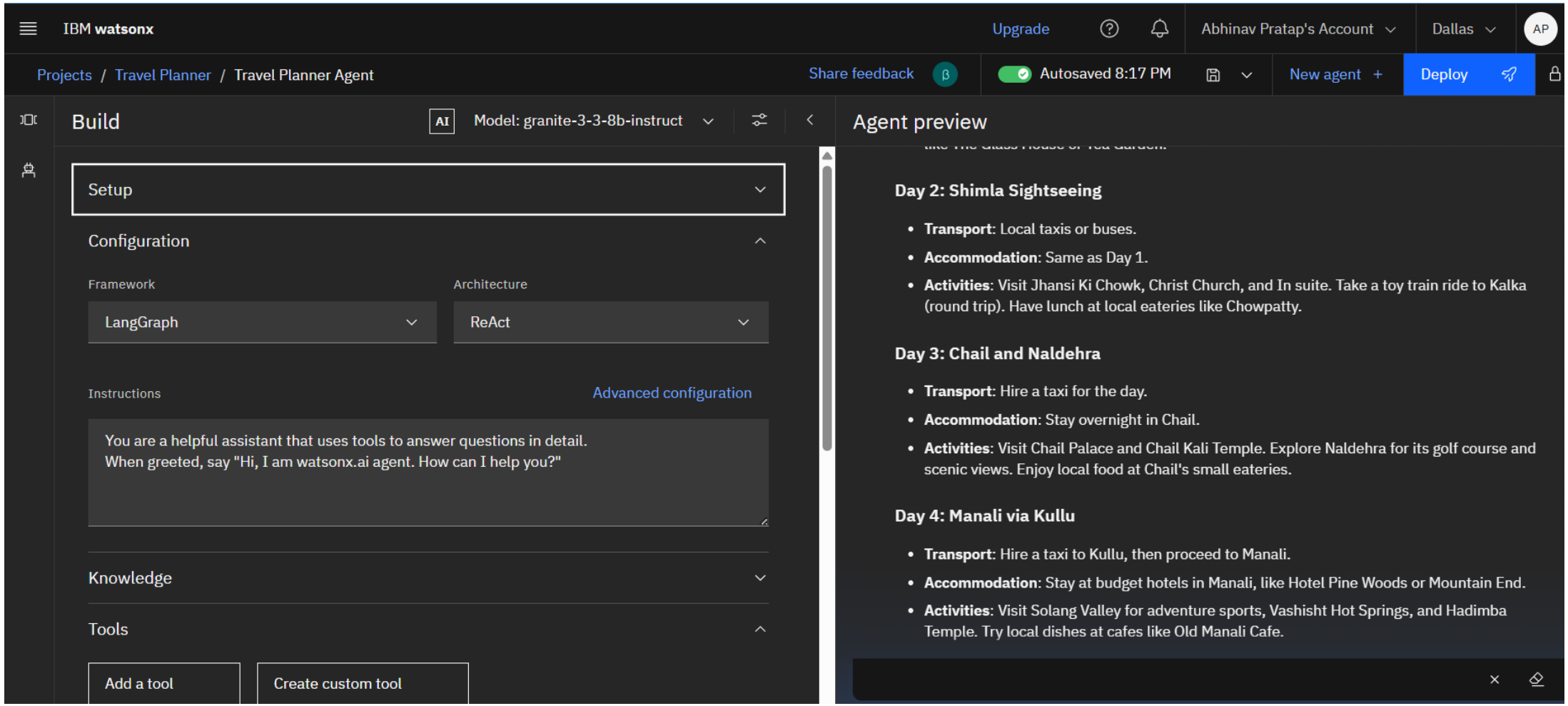
1. **Input Collection:** User provides trip preferences (location, duration, budget, interest)
2. **AI Processing:** Granite LLM generates travel plan with itinerary
3. **Real-time Data:** Weather & alerts fetched
4. **Output:** Complete plan with destinations, hotels, and transportation

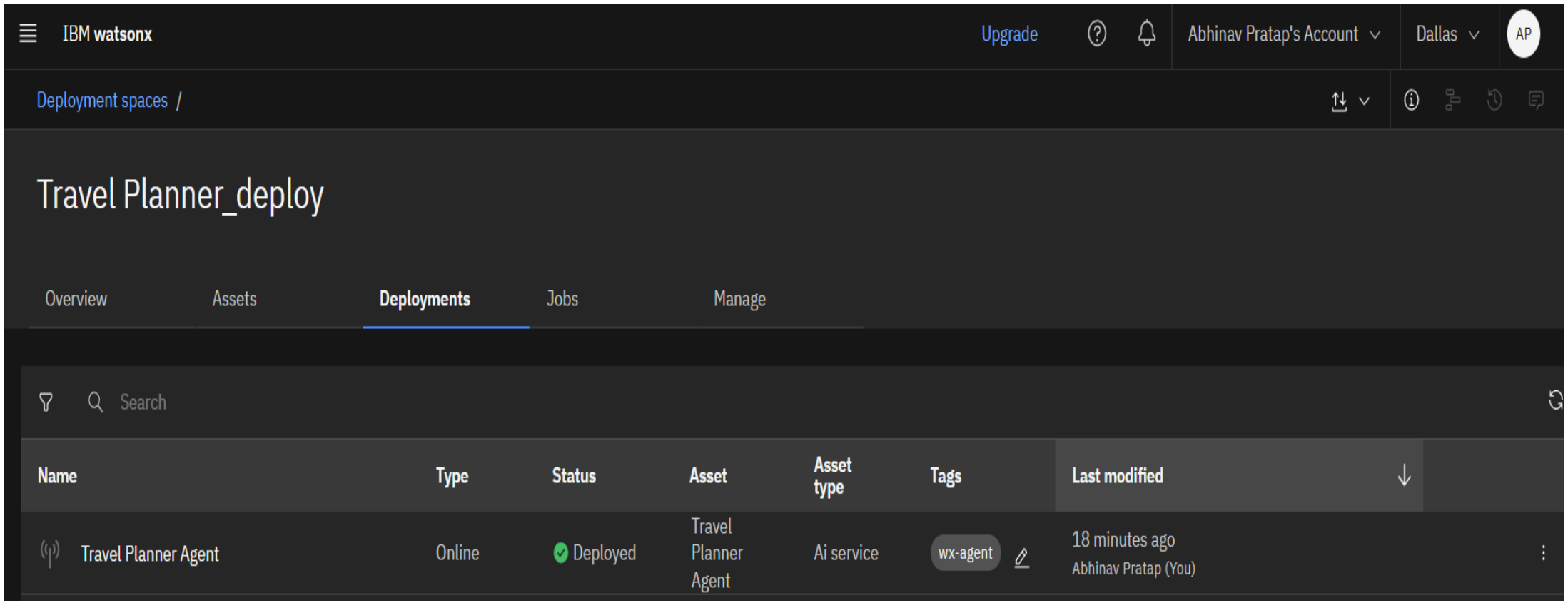
Deployment Steps on IBM Cloud:

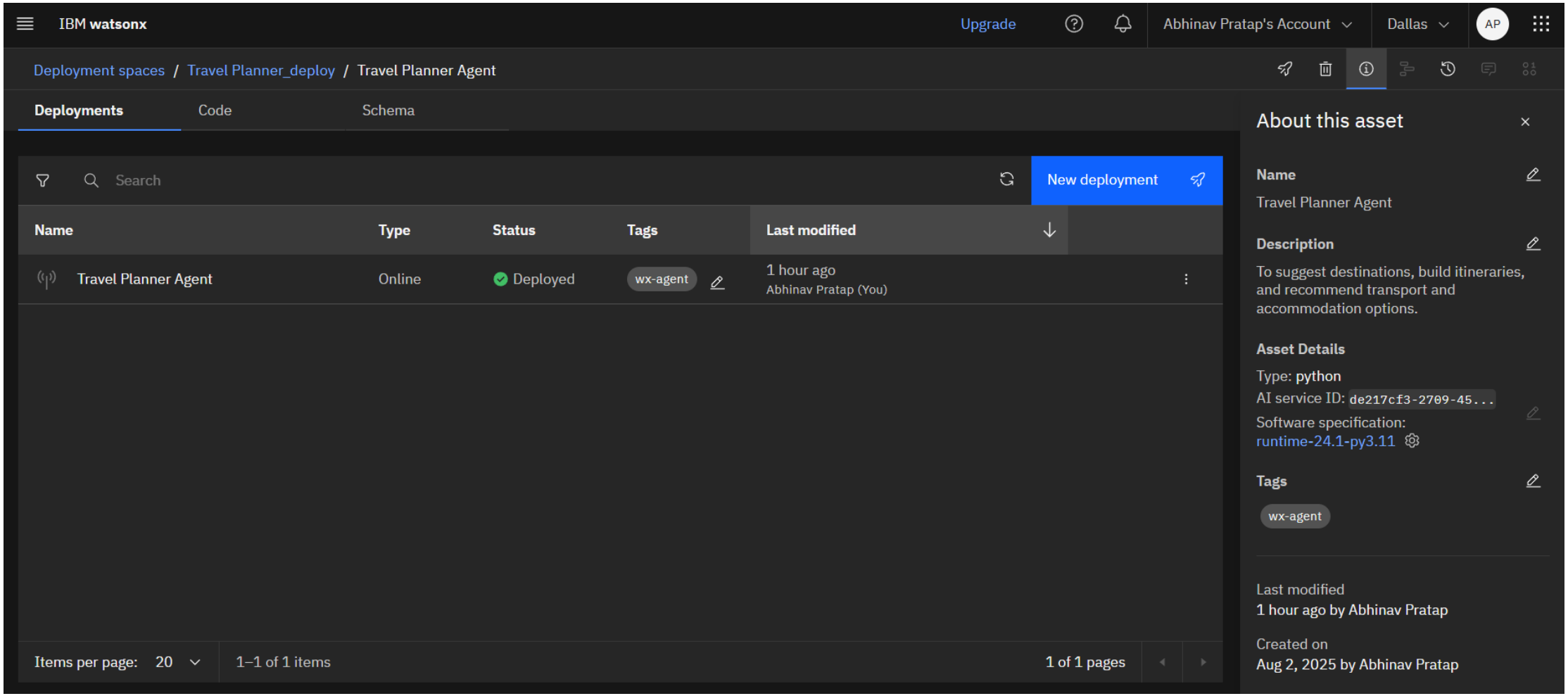
1. **Create Watsonx.ai instance and Watson Studio project**
2. **Use Python notebook with Granite model**
3. **Generate text-based responses**

RESULT




IBM watsonx
Upgrade
Abhinav Pratap's Account
Dallas
AP
Projects / Travel Planner / Travel Planner Agent
Share feedback
Autosaved 8:17 PM
New agent +
Deploy
Build
AI
Model: granite-3-3-8b-instruct
Agent preview
Setup
Configuration
Framework
LangGraph
Architecture
ReAct
Instructions
Advanced configuration
You are a helpful assistant that uses tools to answer questions in detail.
When greeted, say "Hi, I am watsonx.ai agent. How can I help you?"
Knowledge
Tools
Add a tool
Create custom tool
Day 2: Shimla Sightseeing
Transport: Local taxis or buses.
Accommodation: Same as Day 1.
Activities: Visit Jhansi Ki Chowk, Christ Church, and In suite. Take a toy train ride to Kalka (round trip). Have lunch at local eateries like Chowpatty.
Day 3: Chail and Naldehra
Transport: Hire a taxi for the day.
Accommodation: Stay overnight in Chail.
Activities: Visit Chail Palace and Chail Kali Temple. Explore Naldehra for its golf course and scenic views. Enjoy local food at Chail's small eateries.
Day 4: Manali via Kullu
Transport: Hire a taxi to Kullu, then proceed to Manali.
Accommodation: Stay at budget hotels in Manali, like Hotel Pine Woods or Mountain End.
Activities: Visit Solang Valley for adventure sports, Vashisht Hot Springs, and Hadimba Temple. Try local dishes at cafes like Old Manali Cafe.





CONCLUSION

The Travel Planner Agent significantly simplifies the travel planning process. With the power of IBM Granite and cloud computing, users receive personalized, dynamic, and budget-friendly travel plans in seconds. It transforms a complex task into an intelligent and seamless experience, making travel more enjoyable and stress-free.

FUTURE SCOPE

- Integration with real-time booking APIs (e.g., hotel, flights)
- Voice assistant integration for hands-free planning
- Multi-language support for global use
- Improved personalization with user history and feedback
- Offline mobile assistant app using IBM Edge services

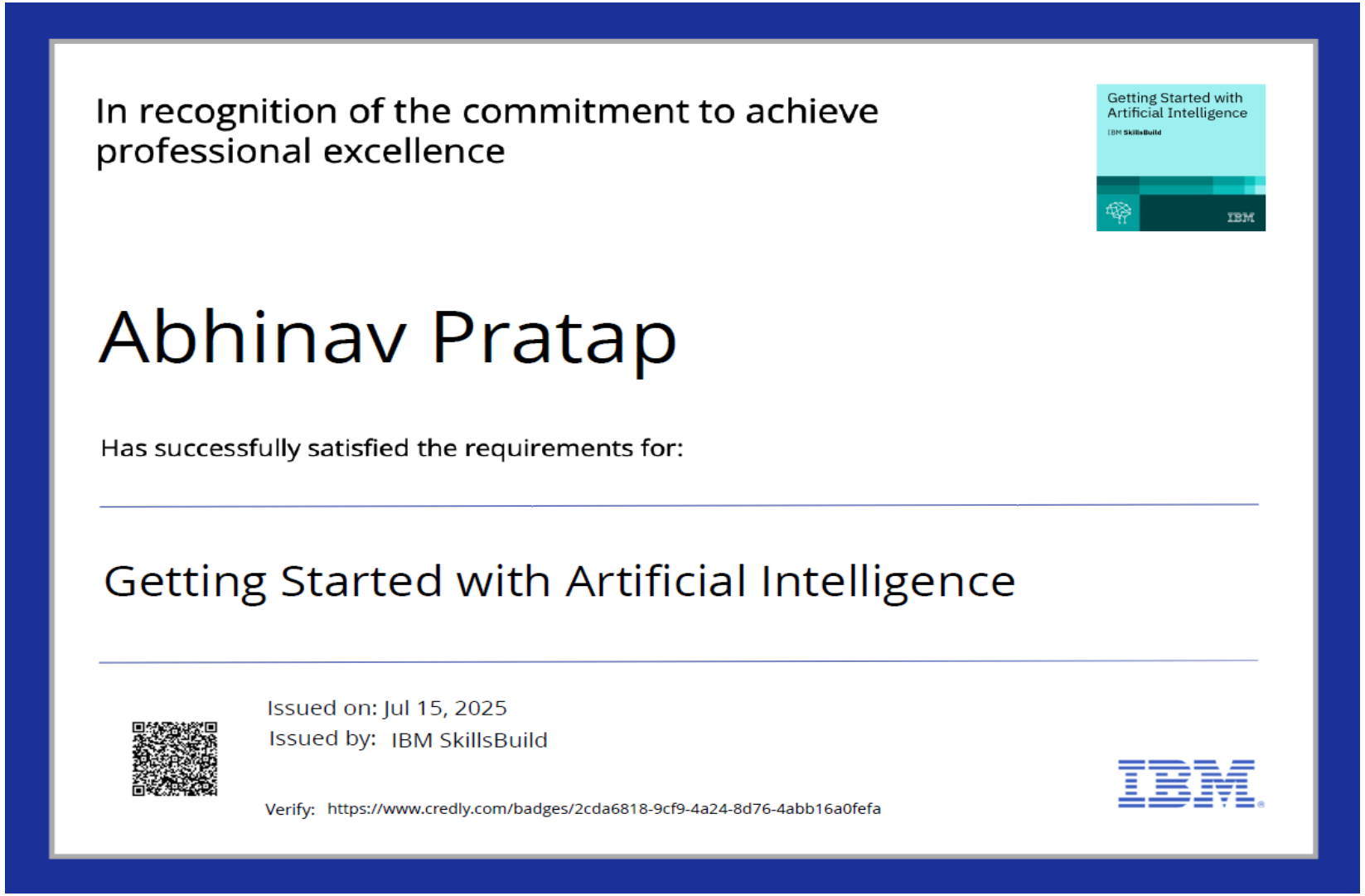
REFERENCES

- IBM Cloud Documentation – https://cloud.ibm.com/docs
- IBM Granite (watsonx.ai) – https://cloud.ibm.com/catalog/services/watsonx-ai
- IBM Cloud Object Storage – https://cloud.ibm.com/catalog/services/cloud-object-storage
- All generated outputs are from IBM Foundation Model (Granite)

GITHUB LINK

https://github.com/pratapabhinav88/Travel-Planner-Agent

IBM CERTIFICATIONS



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for the completion of

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(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT) **Learning hours:** 20 mins

THANK YOU

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