CAPSTONE PROJECT

TRAVEL PLANNER AGENT

Presented By:
1. Komal Bhagat - G H Raisoni University - CSE

edunet foundation

OUTLINE

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PROBLEM STATEMENT

Planning a trip involves multiple complex decisions such as selecting destinations, booking accommodations, organizing travel, and checking weather conditions. This process can be time-consuming and overwhelming for travelers.

Many users face difficulty aligning their travel plans with their budget, preferences, and available time. Moreover, traditional tools lack the ability to offer real-time, personalized assistance based on changing factors like weather, availability, or cost.

PROPOSED SOLUTION

- This project proposes an AI-based Travel Planner Agent built using IBM Cloud services and Watsonx Granite LLM.
- The system accepts natural language queries from users and generates personalized destination suggestions, optimized itineraries, travel tips, and recommendations using IBM Granite models.
- All logic is handled using Watsonx.ai's prompt interface and runtime services.

SYSTEM APPROACH

- • IBM Cloud Lite account used
- • Services: Watsonx.ai, Watsonx Runtime, Deployment Space
- • Prompt-based agent design using **llama-3-3-70b-instruct** model
- • Deployment through Watsonx Agentic Lab with live testing interface

ALGORITHM & DEPLOYMENT

- **Algorithm Selection:**

  Used IBM **llama-3-3-70b-instruct** (LLM) for natural language understanding and response generation. Chosen for its ability to handle travel queries without manual training.

- **Data Input:**

  "Suggest a 3-days travel itinerary for Jaipur under Rs 15,000 for solo traveler in october."

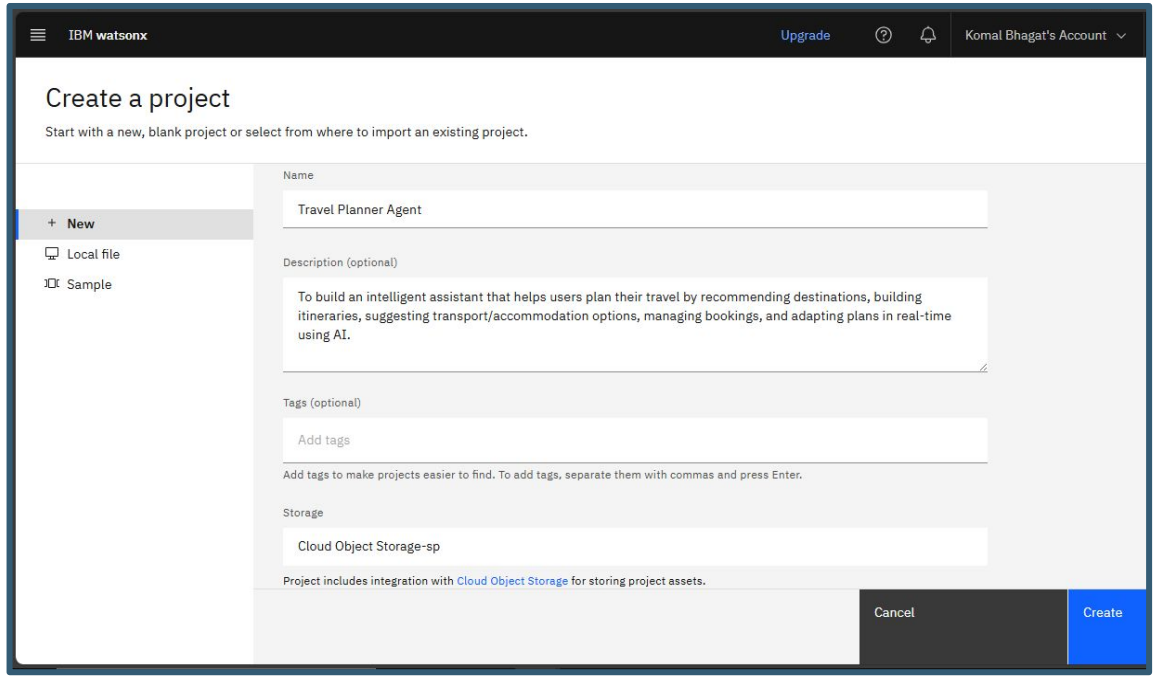
- **Training Process:**

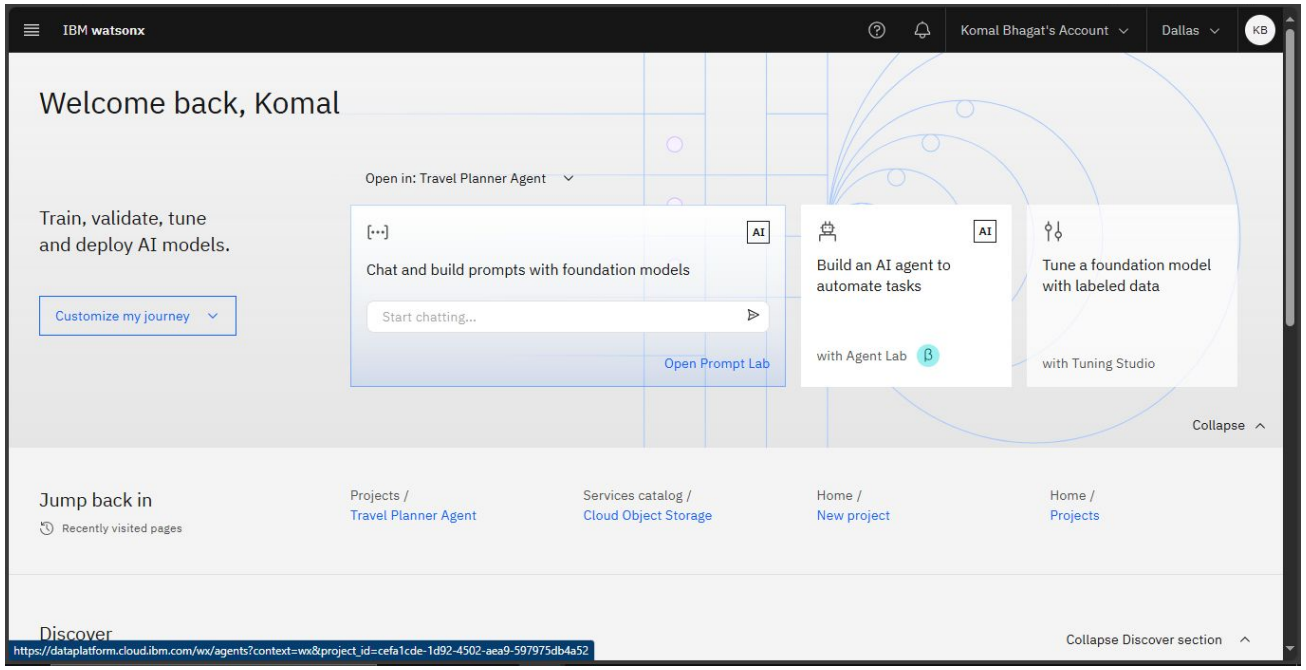
  No training required. Pre-trained model used. Prompt tuning was done to improve output quality.

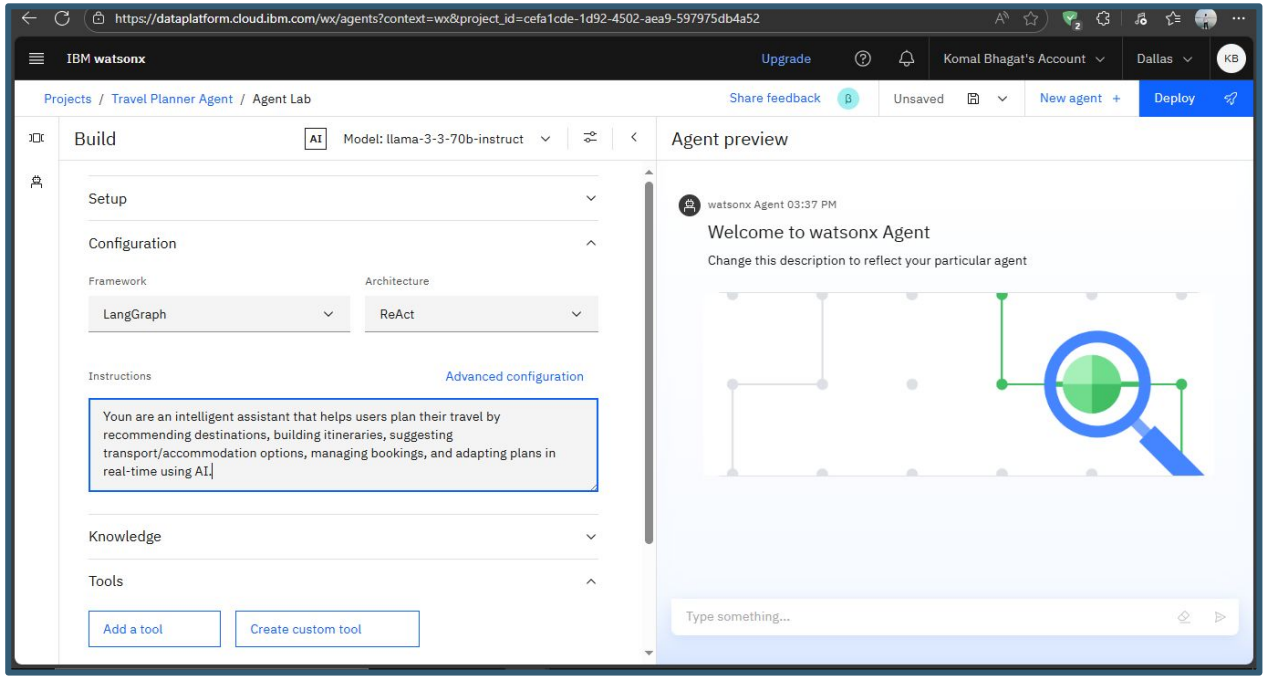
- **Prediction Process:**

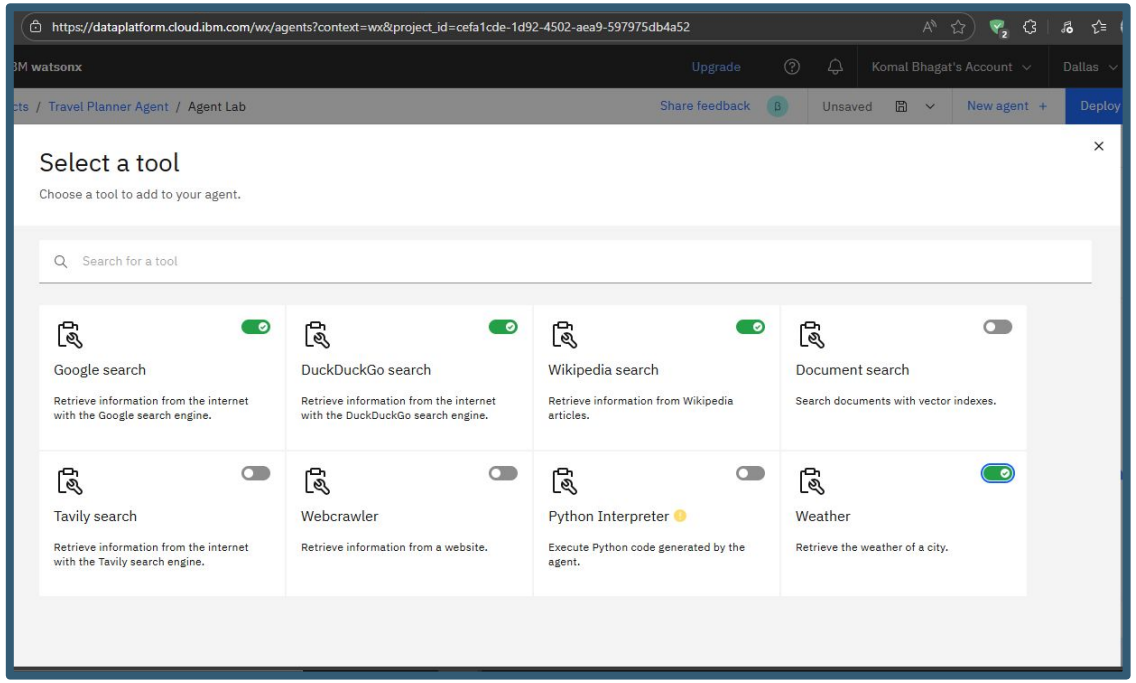
  The model generates real-time itineraries, travel suggestions, and packing tips based on user input.

- **Deployed using Watsonx.ai and IBM Cloud Runtime.**







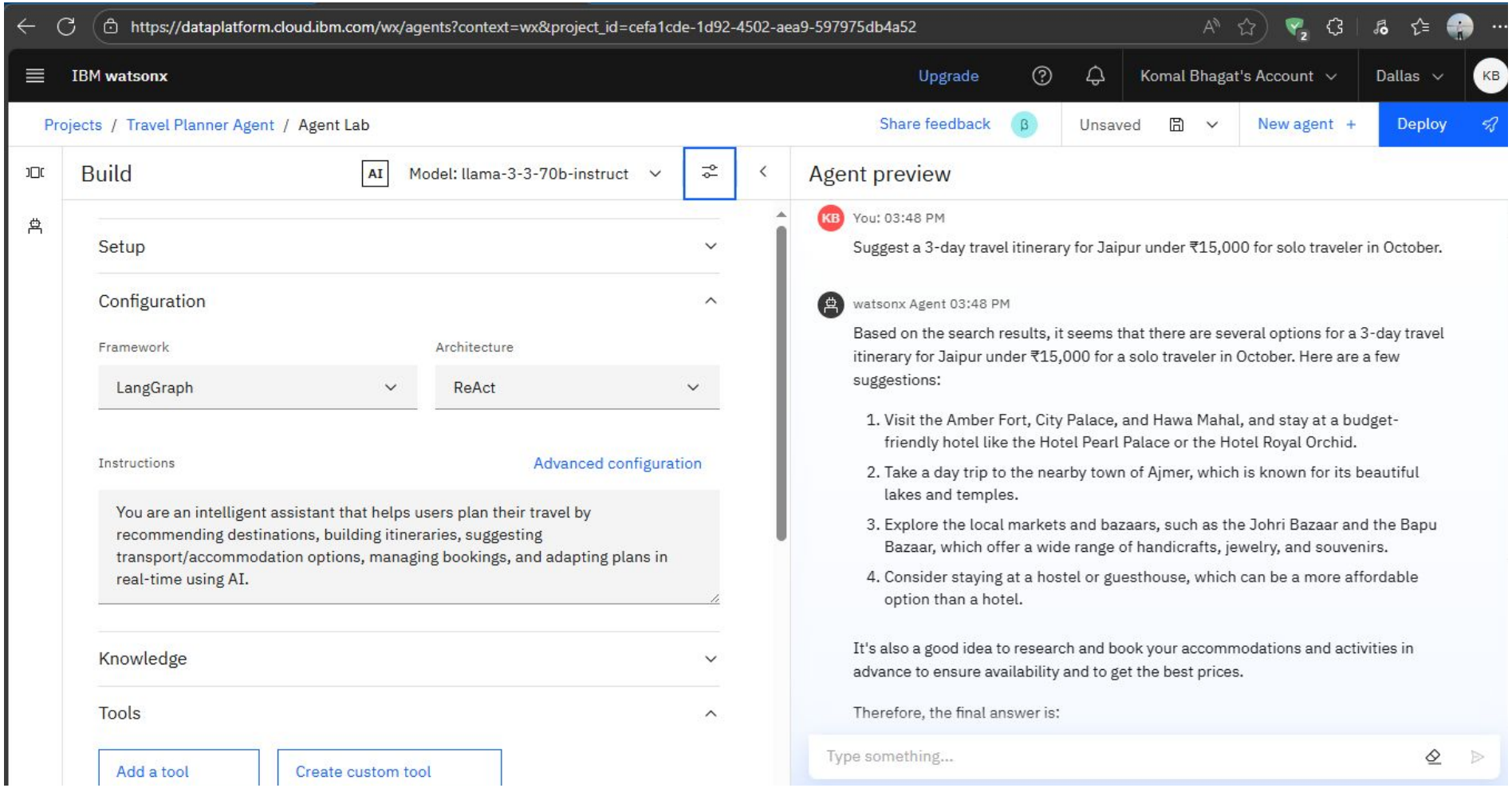


RESULT

Prompt:
Suggest a 3-day travel itinerary for Jaipur under ₹15,000 for a solo traveler in October.

Output:
1. Visit Amber Fort, City Palace, and Hawa Mahal. Stay at budget hotels like Hotel Pearl Palace or Hotel Royal Orchid.
2. Take a day trip to Ajmer to explore lakes and temples.
3. Explore Johri Bazaar and Bapu Bazaar for handicrafts, jewelry, and local souvenirs.
4. Consider staying in hostels or guesthouses for cost-effective accommodation.

RESULT



CONCLUSION

- The Travel Planner Agent simplifies the trip planning process by using IBM Watsonx foundation models.
- It provides smart, real-time, personalized travel advice, thus saving time and effort for users.
- The project demonstrates effective use of IBM Cloud's AI services for solving a real-world problem with minimal infrastructure.

FUTURE SCOPE

- Integration with live booking platforms (flights, hotels)
- Multilingual capabilities for regional users
- Downloadable itineraries or offline travel guides

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