#### **CAPSTONE PROJECT**

### TRAVEL PLANNER AGENT

#### **Presented By:**

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#### **OUTLINE**

- Problem Statement
- Proposed System/Solution
- System Development Approach
- Algorithm & Deployment
- Result (Output Image)
- Conclusion
- Future Scope
- References



### PROBLEM STATEMENT

Planning trips can be time-consuming and overwhelming. Travelers often struggle to:

- Find reliable information about destinations, itineraries, and budgets.
- Get personalized recommendations based on their preferences.
- Access all this information in one place without visiting multiple websites or apps.
- Traditional travel planning methods (manual research or generic travel websites) lack interactivity, personalization, and quick answers to specific queries.



# PROPOSED SOLUTION

Develop an Al-powered Travel Planner Agent using IBM watsonx.ai that:

- 1. Uses a vector index to retrieve travel information (destinations, itineraries, FAQs).
- 2. Leverages foundation models (e.g., Mistral-Large or Llama 3) for natural language interactions.
- 3. Provides real-time, conversational answers to travel-related questions.
- 4. Offers features like:Destination recommendationsSample itinerariesBudget estimatesTravel tips and FAQs
- Deploys as a service (via Deployment Space) to be accessed through APIs or integrated into a chatbot interface.



# SYSTEM APPROACH

- 1. IBM Cloud Account with access to watsonx.ai Studio, watsonx.ai Runtime, and Cloud Object Storage (Lite plan is sufficient).
- 2. Stable Internet Connection (minimum 5 Mbps) for cloud operations and model interactions.
- 3. Modern Web Browser (Google Chrome, Microsoft Edge, or Mozilla Firefox) for accessing IBM Cloud services.
- 4. Basic Local Machine (4 GB RAM, dual-core processor, Windows/Mac/Linux) to run the browser and manage files.
- 5. Consistent Region Selection (e.g., London, Sydney) to ensure all services—project, runtime, and deployment space—are in the same region.

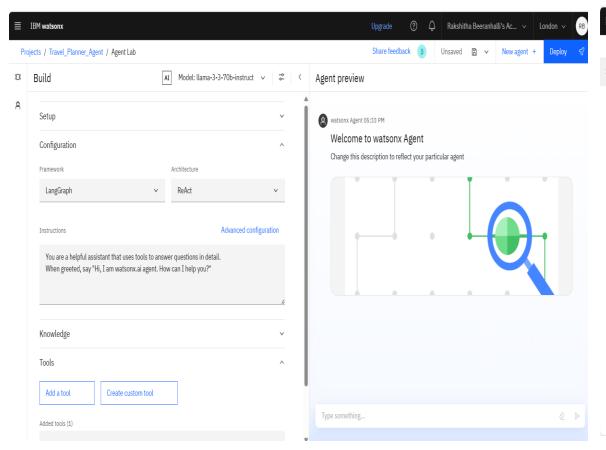


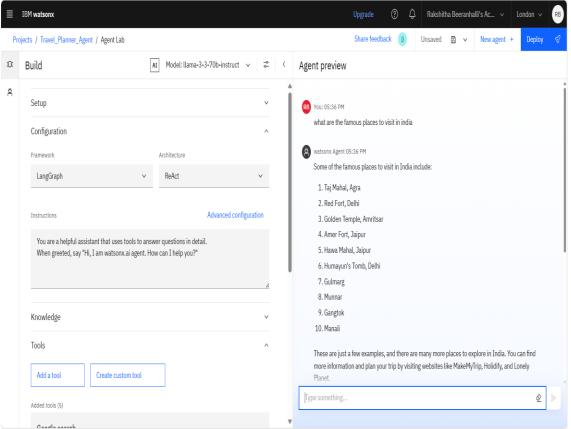
# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx Al Studio
- IBM Cloud Watsonx Al runtime
- IBM Cloud Functions
- IBM Cloud service
- IBM Granite (via watsonx.ai studio)
- IBM Cloud Object Storage
- IBM Al Tools



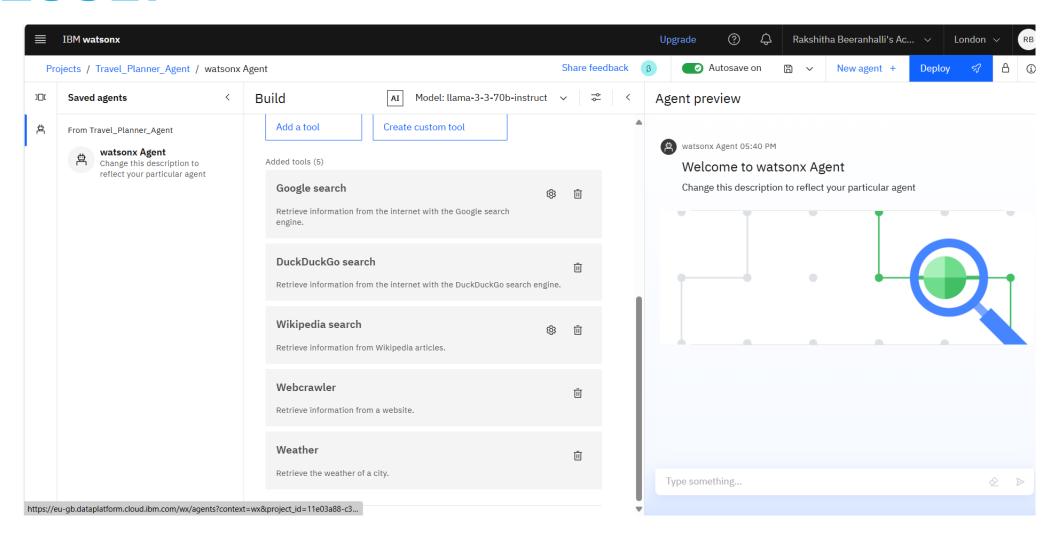
# **RESULT**





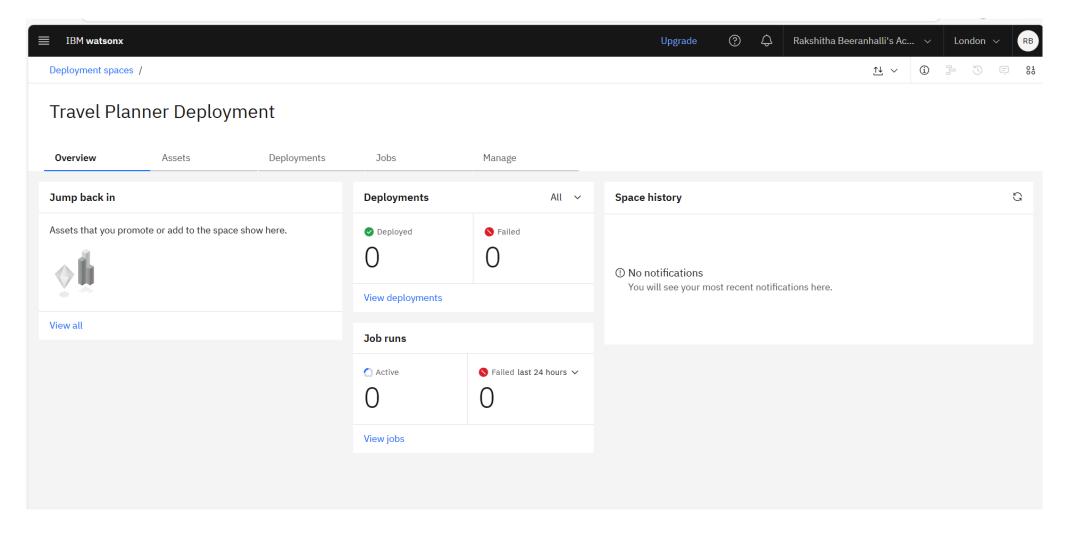


# RESULT





# **RESULT**





# CONCLUSION

The Travel Planner Agent developed using IBM watsonx.ai provides an interactive and efficient solution for trip planning. By integrating a foundation model with a vector index of travel information, the system delivers personalized recommendations, itineraries, and travel tips through natural language interaction. Leveraging cloud-based resources ensures scalability, minimal hardware requirements, and easy deployment as an API or chatbot. This approach demonstrates how AI-powered agents can simplify travel planning and enhance user experience.



### **GITHUB LINK**

https://github.com/Rakshitha-Beeranhalli/Travel\_Planner\_Agent.git



#### **FUTURE SCOPE**

- Real-Time Data Integration
- Personalized Recommendations
- Multi-Language Support
- Booking and Payment Integration
- Mobile App Deployment



# REFERENCES

- IBM. Watsonx.ai Documentation. IBM Cloud. Available at: <a href="https://cloud.ibm.com/docs/watsonx">https://cloud.ibm.com/docs/watsonx</a>
- Ministry of Tourism, Government of India. India Tourism Statistics 2023. Available at: https://tourism.gov.in



#### **IBM CERTIFICATIONS**

In recognition of the commitment to achieve professional excellence



#### Rakshitha Beeranhalli

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



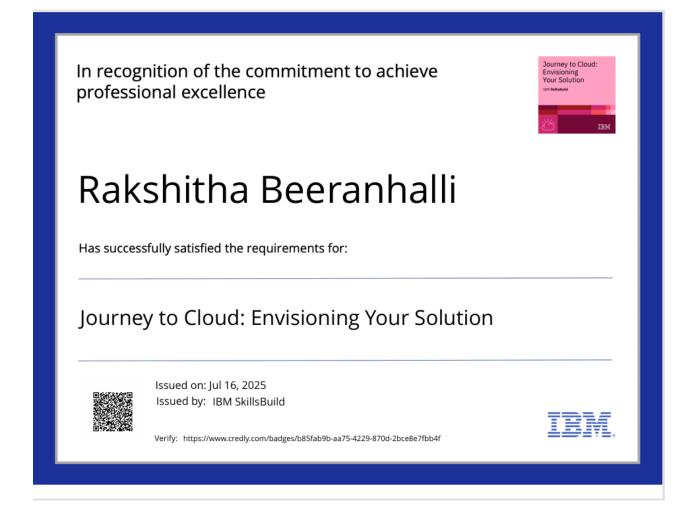
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This certificate is presented to

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### **THANK YOU**

