## IBM HACKATHON PROJECT

# TRAVEL AI AGENT

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## **OUTLINE**

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# PROBLEM STATEMENT

Researchers, students, and professionals often struggle to stay updated with the rapidly growing volume of academic publications, technical articles, datasets, and evolving research trends. Manually reviewing, filtering, and synthesizing information across multiple domains is time-consuming and inefficient.

#### Proposed Solution:

An AI Research Agent that uses Natural Language Processing (NLP), Retrieval-Augmented Generation (RAG), to assist users in conducting efficient literature reviews, generating summaries, identifying research gaps, and recommending relevant papers, datasets, or collaborators.



# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

**IBM** Granite model



### **IBM CLOUD SERVICES USED**

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



## **WOW FACTORS**

This agent will significantly reduce research time, improve the quality of literature reviews, help early-stage researchers find direction, and foster interdisciplinary collaboration by making knowledge more accessible and actionable.

#### Unique features:

Semantic search across research papers, journals, and datasets

Auto-summarization of selected papers

Citation and reference analysis to trace influence

Recommendation of research papers based on a user's current topic

Trend analysis over time for specific keywords or domains.

Collaboration mapping: suggests potential co-authors or institutions based on similar research interests.

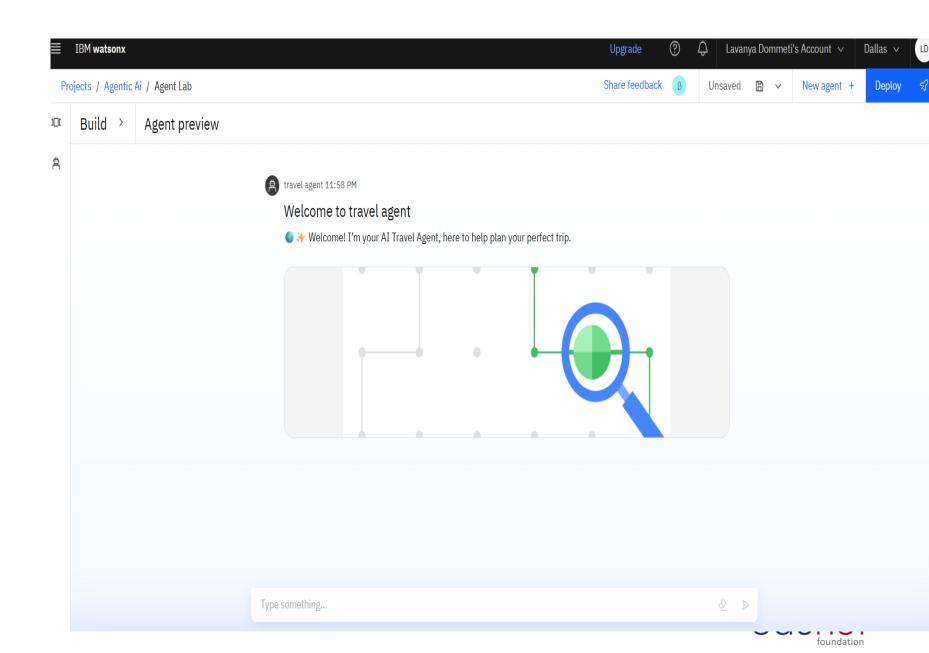


#### **END USERS**

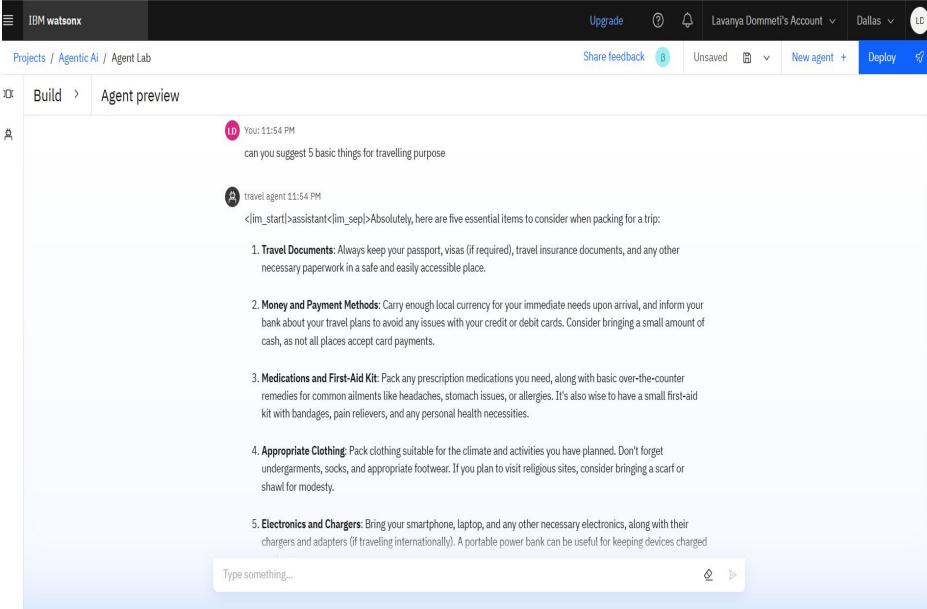
- Academic Researchers
- Research Institutions and Universities
- Industry R&D Teams
- Educators



# **RESULTS**



#### **RESULTS**





#### **RESULTS**

D You: 11:56 PM

What documents do I need to travel to Italy?

travel agent 11:56 PM

<|im\_start|>assistant<|im\_sep|>To travel to Italy, as a citizen of most countries, you will typically need the following
documents:

- Valid Passport: Your passport should be valid for the entire duration of your stay in Italy. It's recommended to have at least six months of validity beyond your planned departure date from Italy.
- Visa (if applicable): Depending on your country of origin, you may need a visa to enter Italy. Check with the Italian
  embassy or consulate in your home country to determine if a visa is required and to understand the application
  process.
- 3. **Return or Onward Ticket**: Proof of onward travel or a return ticket may be required, especially if entering via land from certain neighboring countries. This could be an airline ticket, train ticket, or even a bus ticket.
- 4. **Travel Insurance**: While not a mandatory document for entry, travel insurance is highly recommended to cover any medical emergencies or trip cancellations.
- 5. **Accommodation Reservations**: Although not a legal requirement, having hotel bookings or proof of alternative accommodation (like Airbnb) can be useful, especially if asked by immigration officials.



#### **Deployed Al Agent**

#### **RESULTS**

Deployment spaces / travel\_agent / travel agent /

travel agent Openloyed Online

API reference

Test

Preview



You 10:25 PM

give me plan about 5 days trip to srilanka



travel agent 10:25 PM

Here's a suggested 5-day itinerary for your trip to Sri Lanka:

#### Day 1: Arrival in Colombo

- · Arrive at Bandaranaike International Airport, Colombo.
- Check into your hotel and relax after your journey.
- · In the evening, explore the Galle Face Green, a beautiful promenade along the coast, and enjoy local street food.

#### Day 2: Colombo to Kandy

- · After breakfast, head to Kandy. The journey takes approximately 3 hours by car.
- · Visit the Temple of the Tooth Relic, one of the most sacred places in the Buddhist world.
- · Explore Kandy Lake in the afternoon.
- · Overnight stay in Kandy.

#### Day 3: Kandy to Nuwara Eliya

- · After breakfast, drive to Nuwara Eliya, a journey of about 2.5 hours.
- · Visit a tea plantation on the way and learn about the history of Sri Lankan tea.
- · In the afternoon, visit Gregory Lake and stroll around the town.
- · Overnight stay in Nuwara Eliya.

Type something...





#### CONCLUSION

- The agent can generate reports, suggest hypotheses, and even draft sections of research papers.
- It saves time by automating repetitive tasks like citation management and data extraction.
- Research Agents enhance efficiency, accuracy, and innovation in both academic and industrial R&D.



### **GITHUB LINK**

- Make sure that there should be readme file
- https://github.com/lavanya722/Travel-Agent



# **FUTURE SCOPE**

- Multilingual Research Support
- Voice-Activated Research Assistant
- Real-Time Collaboration Features
- Research Gap and Novel Topic Identification
- Integration with Publishing Platforms
- Al-Assisted Paper Drafting



#### **IBM CERTIFICATIONS**

IBM SkillsBuild Completion Certificate



This certificate is presented to

Lavanya Dommeti

for the completion of

# Introduction to Artificial Intelligence

(MDL-211)
According to the Moodle system of record

Completion date: 21 Jul 2025 (GMT)

Learning hours:

1 hr 15 mins



#### IBM SkillsBuild

#### **Completion Certificate**



This certificate is presented to

Lavanya Dommeti

for the completion of

# Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record



# **THANK YOU**

