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# IBM HACKATHON PROJECT

## TRAVEL AI AGENT

**Presented By: Student**

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# OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

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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.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI 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.

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## END USERS

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

# RESULTS

IBM watsonx

Upgrade ⓘ 🔔

Lavanya Dommeti's Account ▾ Dallas ▾ LD

Projects / Agentic Ai / Agent Lab

Share feedback ⓘ

Unsaved 📁 ▾

New agent +

Deploy 🚀

Build > Agent preview

🗨️ travel agent 11:58 PM

Welcome to travel agent

🌐🔥 Welcome! I'm your AI Travel Agent, here to help plan your perfect trip.




Type something...



🗨️ ▶

foundation







# RESULTS



 IBM watsonx


Upgrade ?  Lavanya Dommeti's Account ▾ Dallas ▾ 



Projects / Agentic Ai / Agent Lab

Share feedback  Unsaved  ▾ New agent + Deploy 

 Build > Agent preview

 You: 11:54 PM  
can you suggest 5 basic things for travelling purpose

 travel agent 11:54 PM  
<|im\_start|>assistant<|im\_sep|>Absolutely, here are five essential items to consider when packing for a trip:  
  
1. **Travel Documents:** Always keep your passport, visas (if required), travel insurance documents, and any other necessary paperwork in a safe and easily accessible place.  
  
2. **Money and Payment Methods:** Carry enough local currency for your immediate needs upon arrival, and inform your bank about your travel plans to avoid any issues with your credit or debit cards. Consider bringing a small amount of cash, as not all places accept card payments.  
  
3. **Medications and First-Aid Kit:** Pack any prescription medications you need, along with basic over-the-counter remedies for common ailments like headaches, stomach issues, or allergies. It's also wise to have a small first-aid kit with bandages, pain relievers, and any personal health necessities.  
  
4. **Appropriate Clothing:** Pack clothing suitable for the climate and activities you have planned. Don't forget undergarments, socks, and appropriate footwear. If you plan to visit religious sites, consider bringing a scarf or shawl for modesty.  
  
5. **Electronics and Chargers:** Bring your smartphone, laptop, and any other necessary electronics, along with their chargers and adapters (if traveling internationally). A portable power bank can be useful for keeping devices charged

Type something...  

# RESULTS



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:

1. **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.
2. **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.

## RESULTS

Deployment spaces / Hosted / Research Agent /

Research Agent ✓ Deployed Online

API reference

Test

Preview



You 03:02 PM

Give me a simple hypothesis about plants and sunlight.



Research Agent 03:02 PM

Here are some simple hypotheses about plants and sunlight:

1. Hypothesis: Plants grow taller when they receive more sunlight.

- **Independent Variable:** Amount of sunlight received.
- **Dependent Variable:** Height of the plants.
- **Source:** [Brainly](#)

2. Hypothesis: Light helps plants grow.

- **Prediction:** If I put my plants in the warm sun, they will grow faster.
- **Source:** [LinkedIn - Lukas Vermeer](#)

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## 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

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# FUTURE SCOPE

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

7/31/25, 5:45 PM

Completion Certificate | SkillsBuild

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**