## **IBM PROJECT**

## TRAVEL AGENT

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## **OUTLINE**

- Problem Statement
- Technology used
- IBM Cloud Services Used
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- End users
- Result
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- Future scope
- Git-hub Link
- IBM Certifications



# 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.

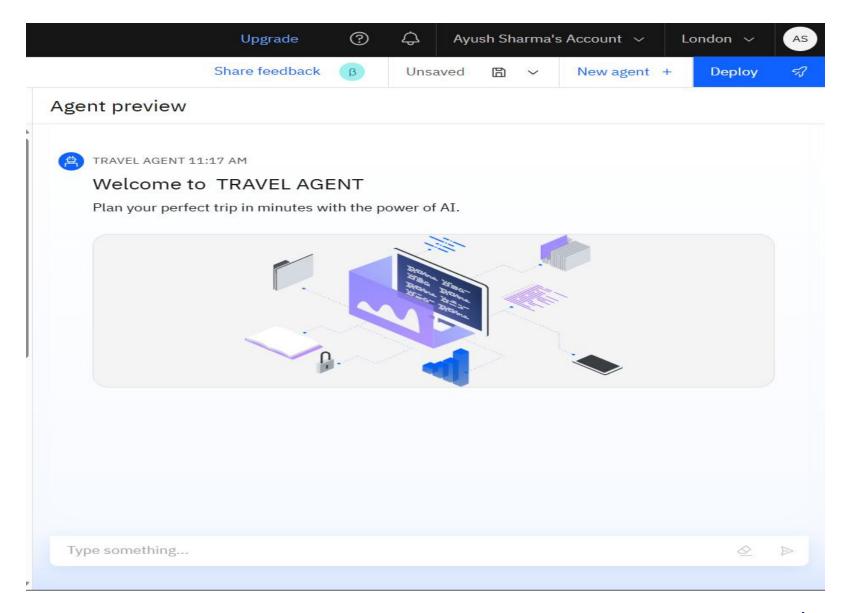
Collaboration mapping: suggests potential co-authors or institutions based on similar research interests.



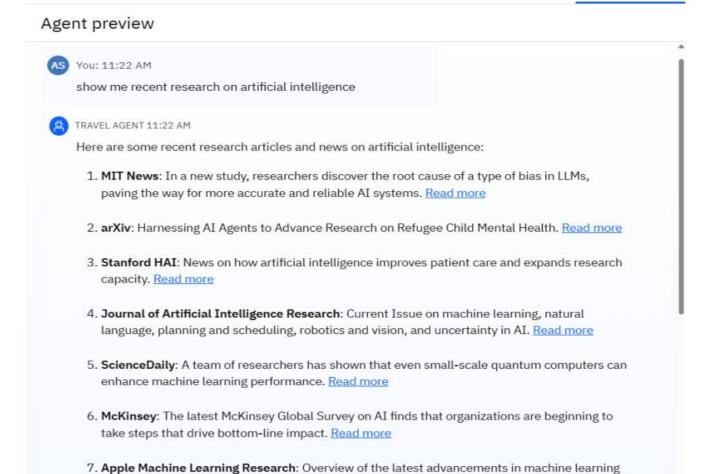
### **END USERS**

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







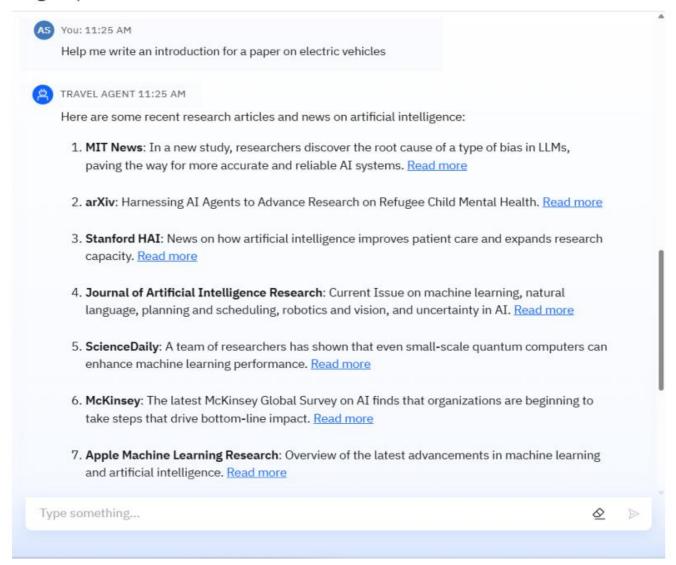


and artificial intelligence. Read more

Type something...

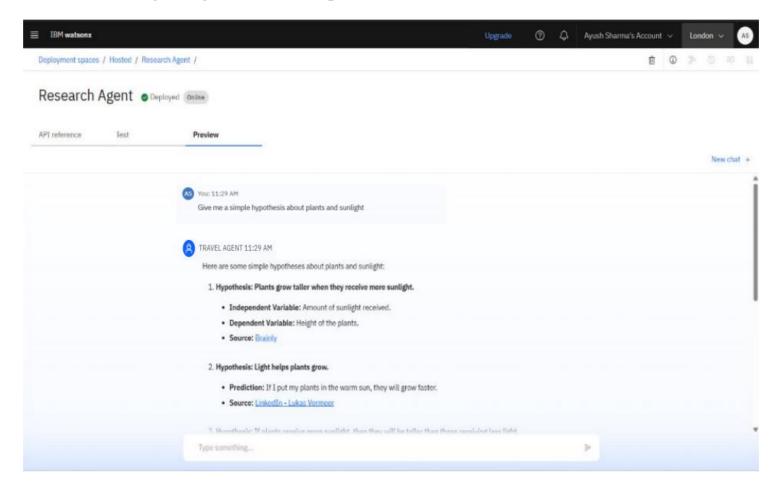


#### Agent preview





## Deployed AI Agent





### 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.



## **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



Git hub lik: https://github.com/ayushssharmaaa



### **IBM CERTIFICATIONS**

In recognition of the commitment to achieve professional excellence



# Ayush Sharma

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



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### IBM SkillsBuild

### **Completion Certificate**



This certificate is presented to

Ayush Sharma

for the completion of

# Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT)

Learning hours: 20 mins



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## **THANK YOU**

