
IBM HACKATHON PROJECT

TRAVEL PLANNER AGENT

AI-POWERED TRIP PLANNING ASSISTANT USING IBM CLOUD LITE / IBM GRANITE

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Department: Bachelor of Technology

Course: Computer science and engineering

OUTLINE

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

PROBLEM STATEMENT

A Travel Planner Agent is an AI-powered assistant designed to simplify and personalize the travel planning process. It leverages real-time data to suggest destinations, build itineraries, and recommend transport and accommodation options. It understands user preferences, budgets, and constraints to create personalized travel plans, and ensures a smooth travel experience through integrated maps, weather updates, and local guides.

TECHNOLOGY USED

- - **IBM Cloud Lite Services:** For hosting and deployment
- - **IBM Granite Foundation Models:** For NLP, itinerary generation, and user interaction
- - **IBM Watson Assistant:** For interactive user communication
- - **IBM Weather Company APIs:** For real-time weather updates
- - **Google Maps API:** For route planning and location integration

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.

END USERS

- - **Individual travelers and tourists**
- - **Travel agencies**
- - **Corporate travel departments**
- - **Event planners and coordinators**

RESULTS

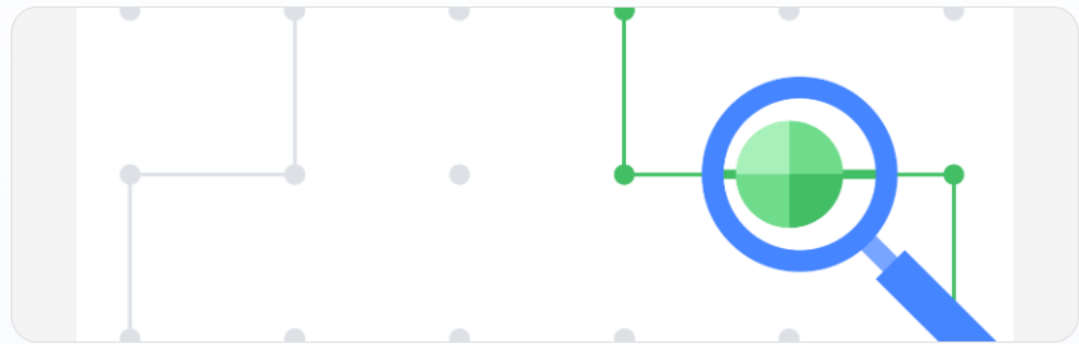
Agent preview



Research Agent 02:54 PM

Welcome to Research Agent

The agent can generate reports, suggest hypotheses, and even draft sections of research papers.



Type something...



RESULTS

- EFFICIENT AND OPTIMIZED TRAVEL PLANS
- ENHANCED USER SATISFACTION AND EXPERIENCE
- REDUCED PLANNING TIME FROM HOURS TO MINUTES
- INCREASED ADAPTABILITY WITH REAL-TIME ADJUSTMENTS

Agent preview



You: 02:55 PM

Show me recent research on artificial intelligence.



Research Agent 02:55 PM

Here are some recent research articles and news on artificial intelligence:

1. **MIT News:** In a new study, researchers discover the root cause of a type of bias in LLMs, paving the way for more accurate and reliable AI systems. [Read more](#)
2. **arXiv:** Harnessing AI Agents to Advance Research on Refugee Child Mental Health. [Read more](#)
3. **Stanford HAI:** News on how artificial intelligence improves patient care and expands research capacity. [Read more](#)
4. **Journal of Artificial Intelligence Research:** Current Issue on machine learning, natural language, planning and scheduling, robotics and vision, and uncertainty in AI. [Read more](#)
5. **ScienceDaily:** A team of researchers has shown that even small-scale quantum computers can enhance machine learning performance. [Read more](#)
6. **McKinsey:** The latest McKinsey Global Survey on AI finds that organizations are beginning to take steps that drive bottom-line impact. [Read more](#)
7. **Apple Machine Learning Research:** Overview of the latest advancements in machine learning and artificial intelligence. [Read more](#)

Type something...



RESULTS

Agent preview



You: 02:56 PM

Help me write an introduction for a paper on electric vehicles.



Research Agent 02:56 PM

Here are some recent research articles and news on artificial intelligence:

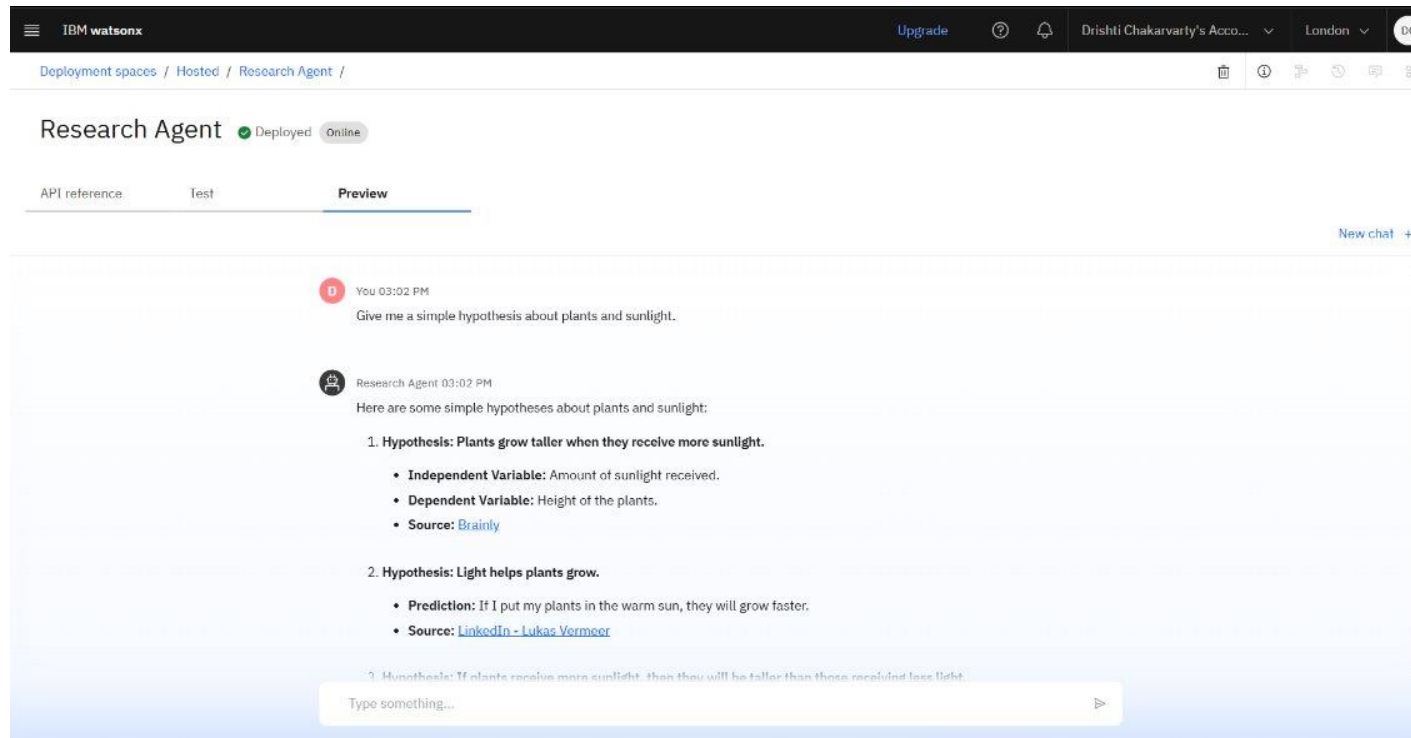
1. **MIT News:** In a new study, researchers discover the root cause of a type of bias in LLMs, paving the way for more accurate and reliable AI systems. [Read more](#)
2. **arXiv:** Harnessing AI Agents to Advance Research on Refugee Child Mental Health. [Read more](#)
3. **Stanford HAI:** News on how artificial intelligence improves patient care and expands research capacity. [Read more](#)
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5. **ScienceDaily:** A team of researchers has shown that even small-scale quantum computers can enhance machine learning performance. [Read more](#)
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7. **Apple Machine Learning Research:** Overview of the latest advancements in machine learning and artificial intelligence. [Read more](#)

Type something...



RESULTS

Deployed AI Agent



The screenshot displays the IBM watsonx user interface. At the top, a dark navigation bar includes the 'IBM watsonx' logo, an 'Upgrade' button, and user account information for 'Drishti Chakarvarthy's Acco...'. Below this, a breadcrumb trail shows 'Deployment spaces / Hosted / Research Agent'. The main content area features the 'Research Agent' name with 'Deployed' and 'Online' status indicators. Three tabs are visible: 'API reference', 'Test', and 'Preview', with the 'Preview' tab selected. The chat interface shows a conversation where the user asks for a hypothesis about plants and sunlight, and the agent responds with two hypotheses, each including independent/dependent variables and a source. A third hypothesis is partially visible at the bottom.

IBM watsonx Upgrade ? ⓘ Drishti Chakarvarthy's Acco... London DC

Deployment spaces / Hosted / Research Agent

Research Agent Deployed Online

API reference Test **Preview**

New chat +

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:

- Hypothesis: Plants grow taller when they receive more sunlight.**
 - **Independent Variable:** Amount of sunlight received.
 - **Dependent Variable:** Height of the plants.
 - **Source:** [Brainly](#)
- Hypothesis: Light helps plants grow.**
 - **Prediction:** If I put my plants in the warm sun, they will grow faster.
 - **Source:** [LinkedIn - Lukas Vermeer](#)
- Hypothesis: If plants receive more sunlight, then they will be taller than those receiving less light.**

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.

REFERENCES AND GITHUB LINK

- **Guthub link: <https://github.com/Mayank-choudhary0001>**

- **IBM Watson Assistant Documentation**

<https://cloud.ibm.com/docs/watson-assistant>

- **IBM Cloud Object Storage Guide**

<https://cloud.ibm.com/docs/cloud-object-storage>

- **IBM Watsonx.ai Studio Overview**

<https://cloud.ibm.com/docs/watsonx-ai>.

- **Building Chatbots with Watson Assistant**

IBM Developer Tutorials.

<https://developer.ibm.com/tutorials>

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
- Integration with Augmented Reality for immersive previews
- Budget prediction and optimization using financial AI tools
- Expansion into business travel management and concierge services

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Mayank Choudhary

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



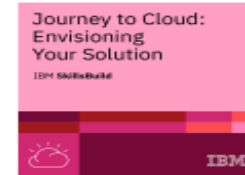
Issued on: Jul 16, 2025
Issued by: IBM SkillsBuild

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Journey to Cloud: Envisioning Your Solution



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IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Mayank Choudhary

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 18 Jul 2025 (GMT)

Learning hours: 20 mins

THANK YOU