CAPSTONE PROJECT

TRAVEL PLANNER 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 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

- Academic Researchers

- Research Institutions and Universities

- Industry R&D Teams

- Educators

RESULTS

RESULTS

RESULTS

RESULTS

Deployed AI Agent:

RESULTS

Deployed AI Agent:

RESULTS

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

- AI-Assisted Paper Drafting

IBM CERTIFICATIONS

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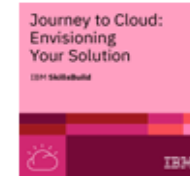
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GITHUB LINK

- **Git hub link : https://github.com/Suraz3123/Travel_Agent.git**

THANK YOU

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