**IBM HACKATHON PROJECT**

## ECO FRIENDLY AI AGENT

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### OUTLINE

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# PROBLEM STATEMENT

Individuals and communities striving to adopt a sustainable lifestyle often struggle to access reliable, personalized, and localized information on eco-friendly practices.

With the overwhelming volume of green living tips, product recommendations, and recycling rules scattered across sources, finding useful guidance becomes time-consuming and inefficient.

# PROPOSED SOLUTION

* An AI-powered Eco Lifestyle Agent using:
* - Retrieval-Augmented Generation (RAG)
* - IBM Granite Foundation Model
* - IBM Cloud Lite Services
* It provides:
* - Personalized sustainability tips
* - Local recycling guidelines
* - Eco product recommendations
* - Info on relevant government schemes
* Users ask in natural language and receive instant, actionable answers.

# TECHNOLOGY USED

* IBM Cloud Lite Services
* Watsonx.ai (Studio & Runtime)
* IBM Granite Foundation Models
* RAG Architecture

### IBM CLOUD SERVICES USED

* + Watsonx.ai Studio – Build and fine-tune RAG models
  + Watsonx.ai Runtime – Host and deploy the AI Agent
  + Agent Lab – Manage chatbot and integration
  + Granite Foundation Models – For natural language understanding

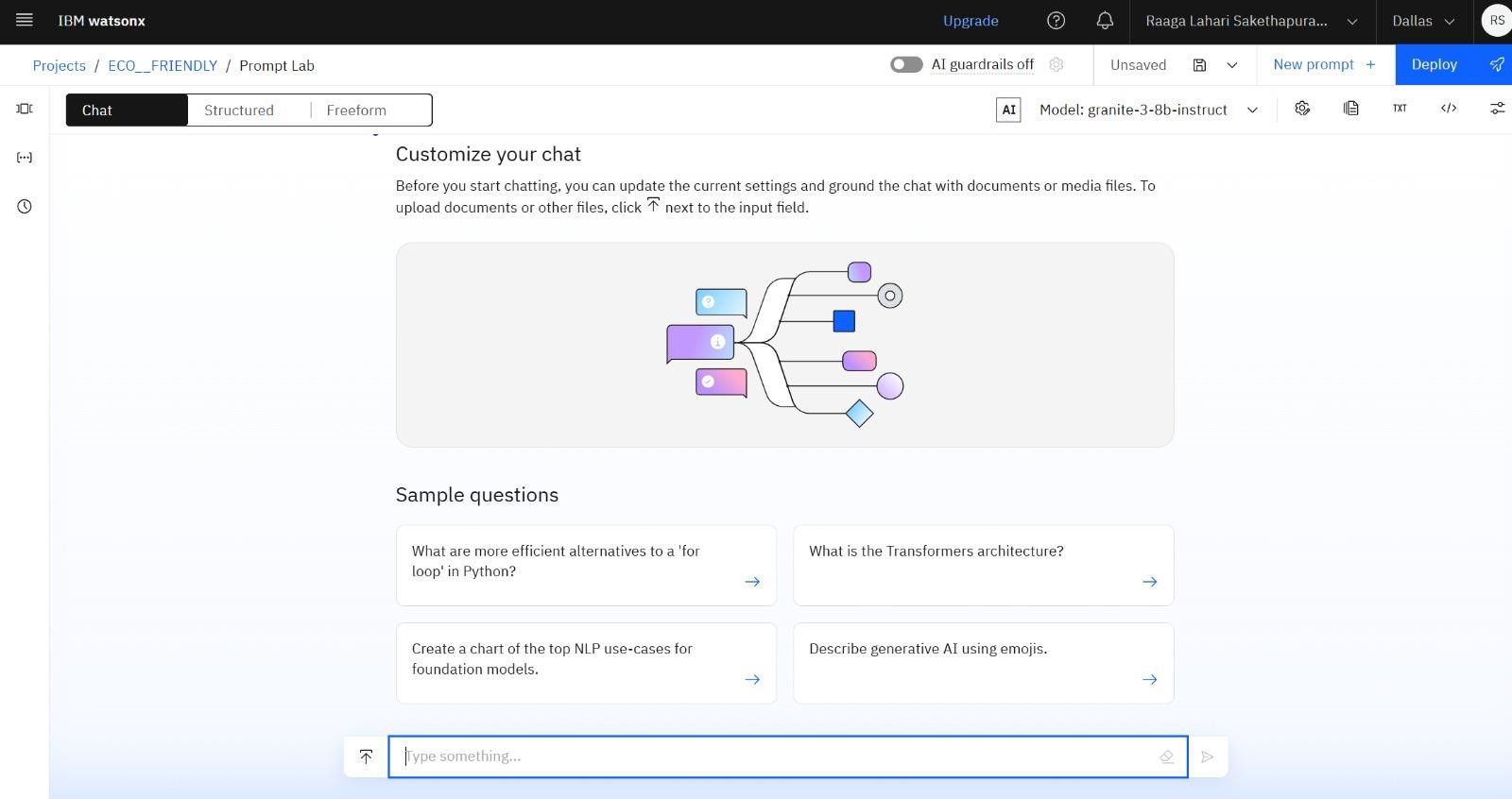
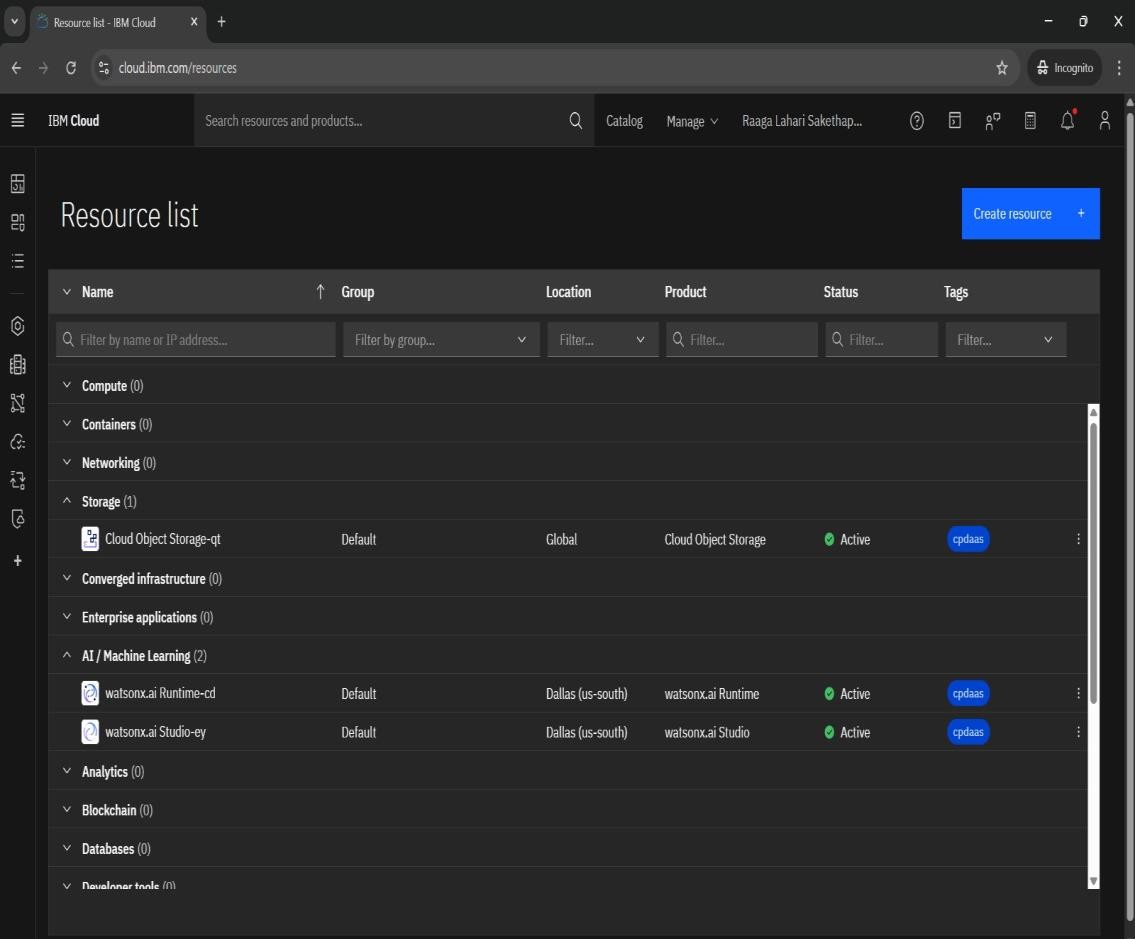
**WOW FACTORS**

* Personalized Sustainability Tips
* Local Recycling & Govt Schemes
* Semantic Search with RAG
* Real-time Green Recommendations
* Actionable Guidance, Not Just Information
* Habit tracking (future)
* Voice and multilingual support (future)

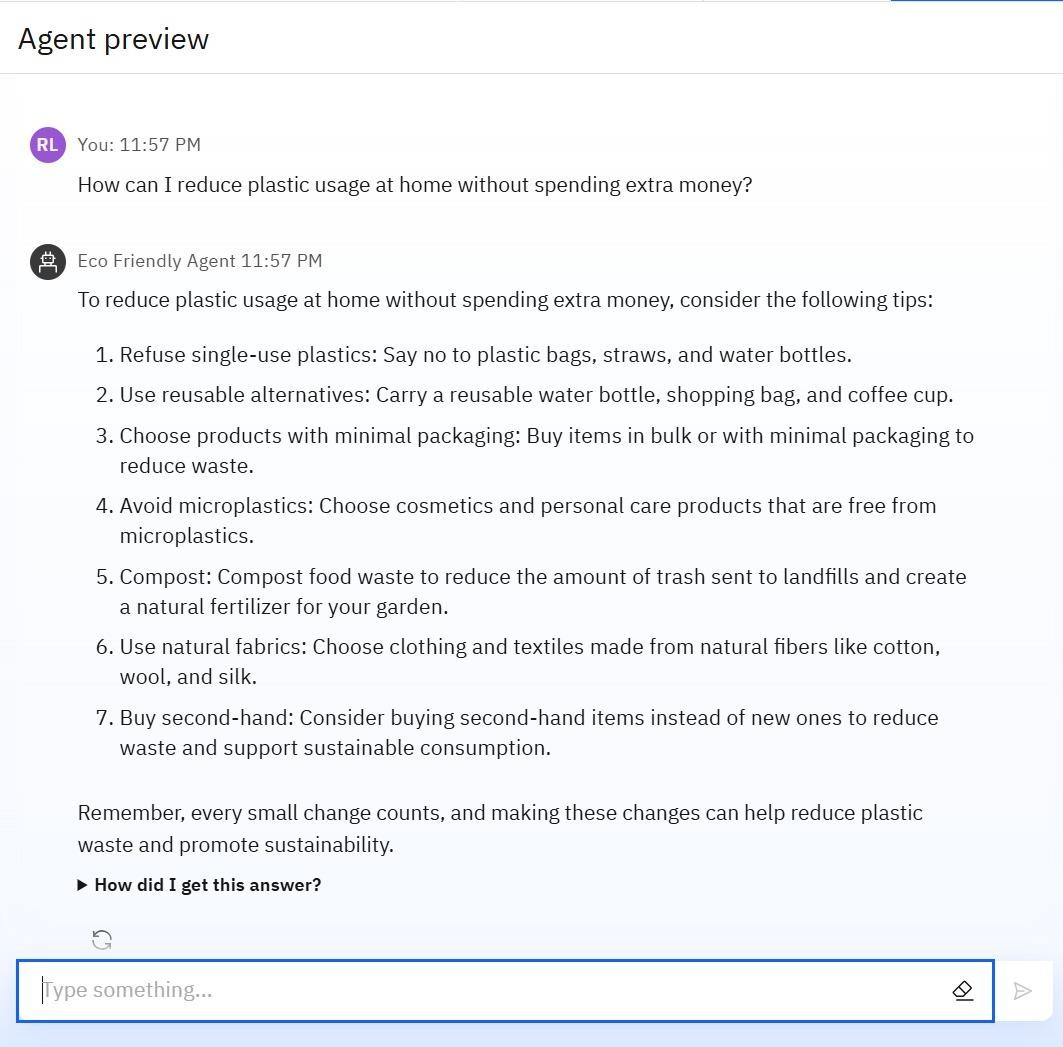
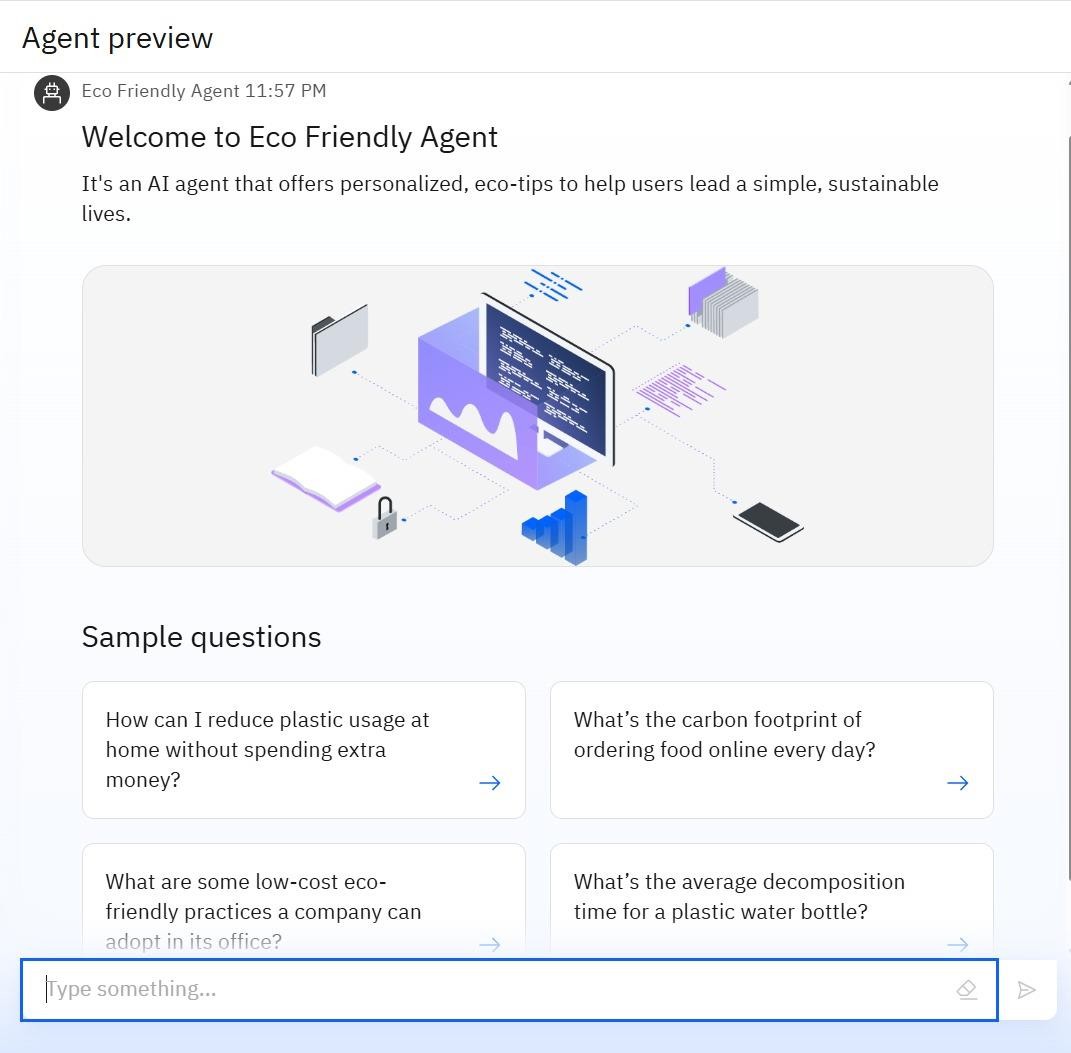
### END USERS

* + - Eco-conscious citizens
  + - Urban households
  + - Schools & universities
  + - NGOs promoting sustainability
  + - Local governments
  + - Event organizers (green events)

**RESULTS**

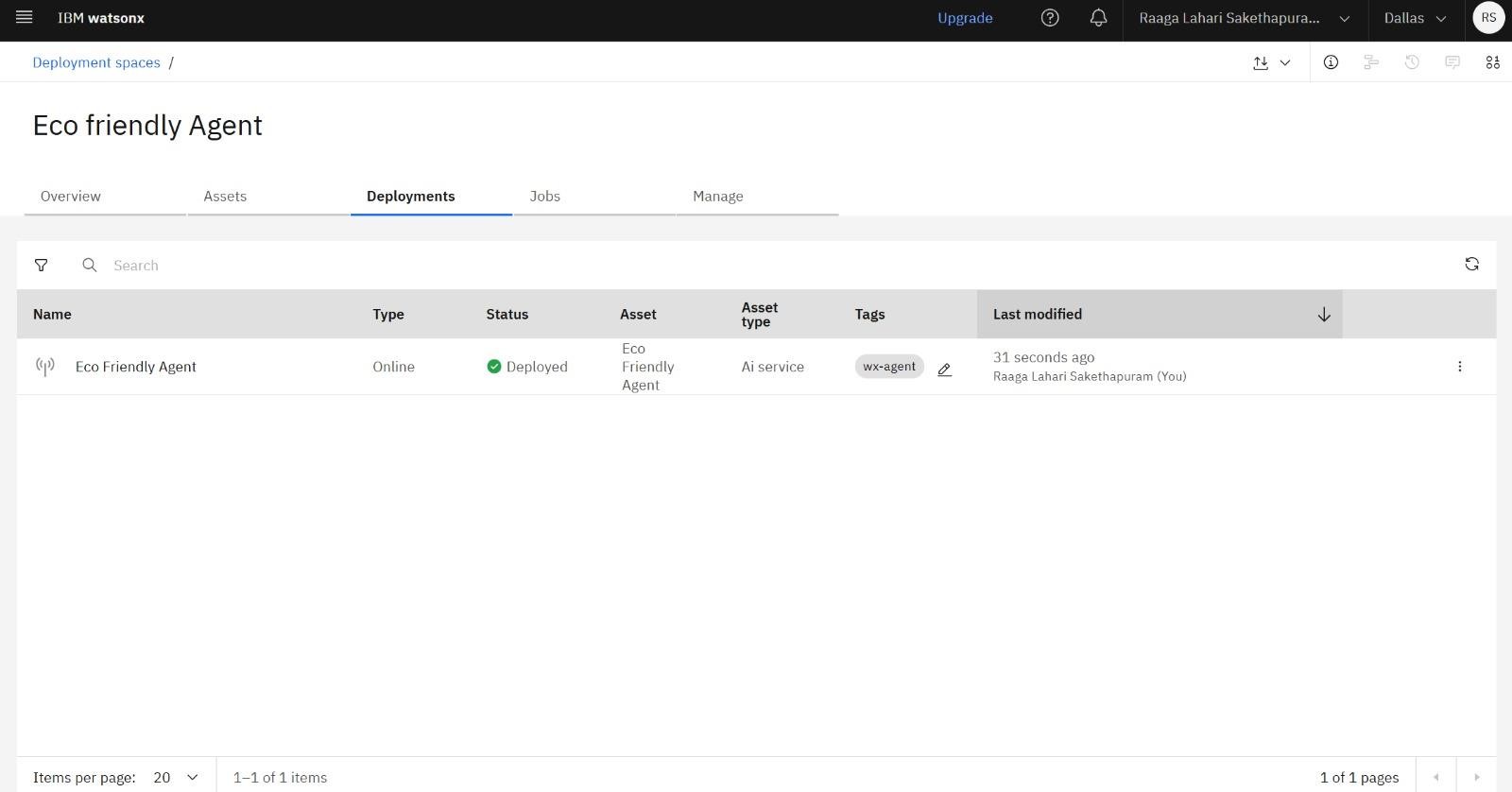
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**RESULTS**

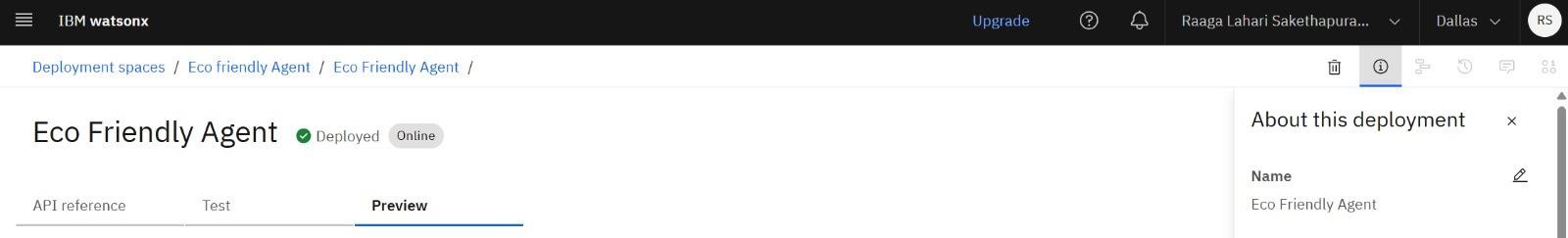
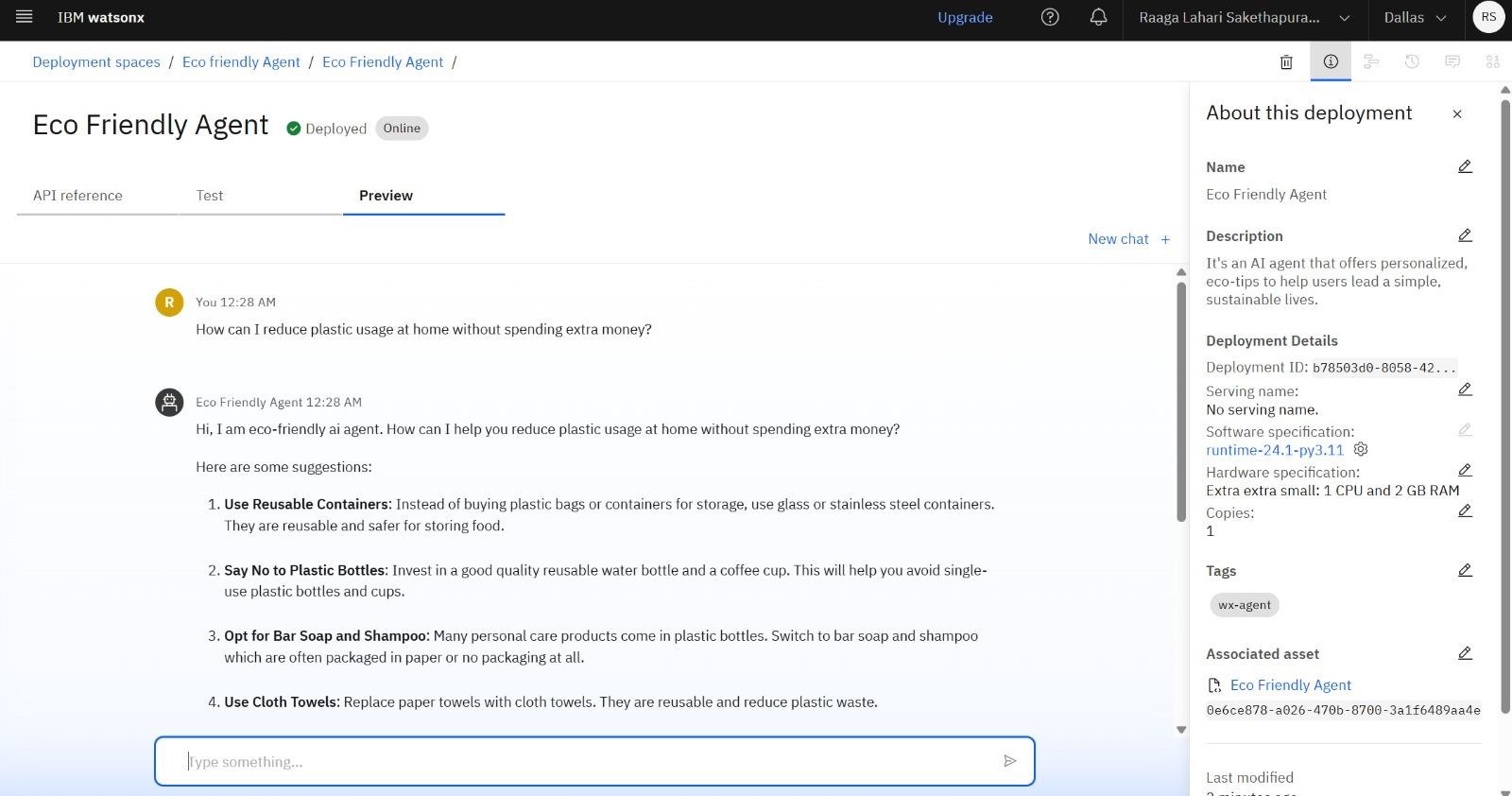
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## RESULTS

DEPLOYED AI AGENT



## RESULTS

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### CONCLUSION

* The Eco Lifestyle Agent bridges the gap between sustainability awareness and action.
* By delivering personalized and localized eco-guidance using IBM Cloud and RAG, it empowers individuals to make small, impactful daily changes for a greener future.

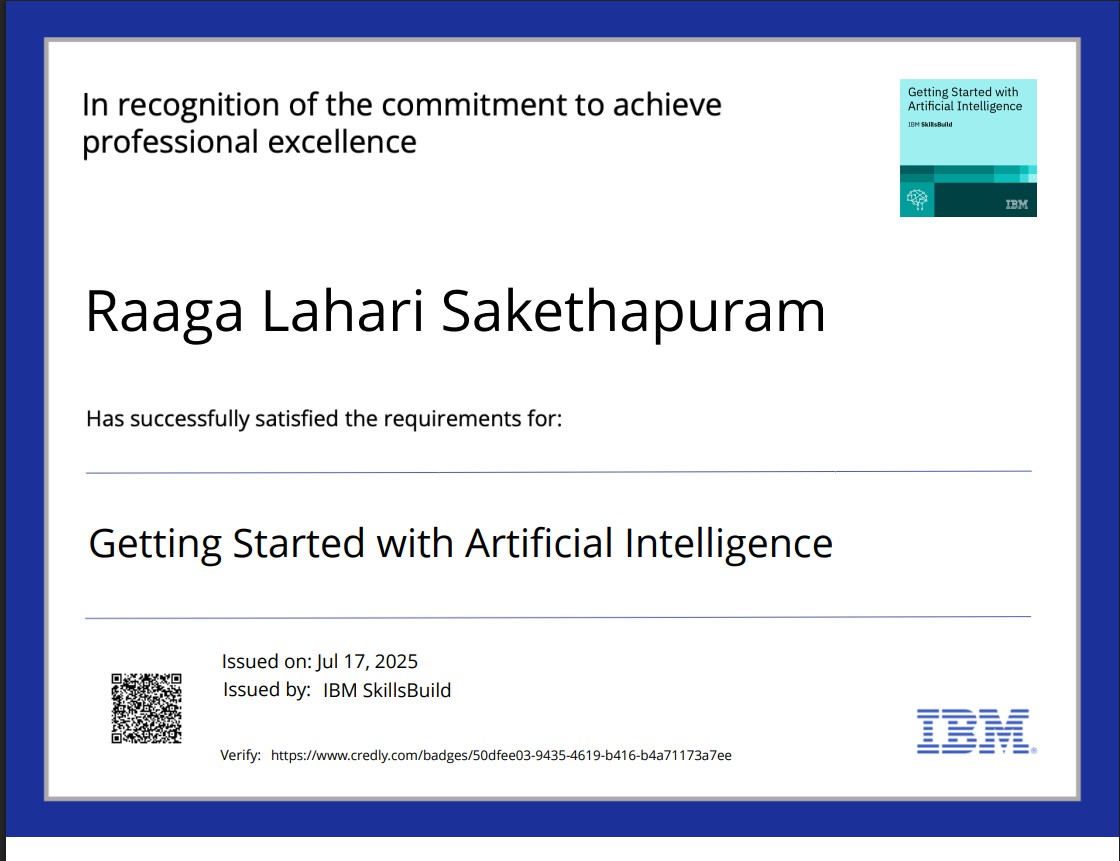
### GITHUB LINK

* <https://github.com/raagalahari/Eco_friendly_AI_Agent>



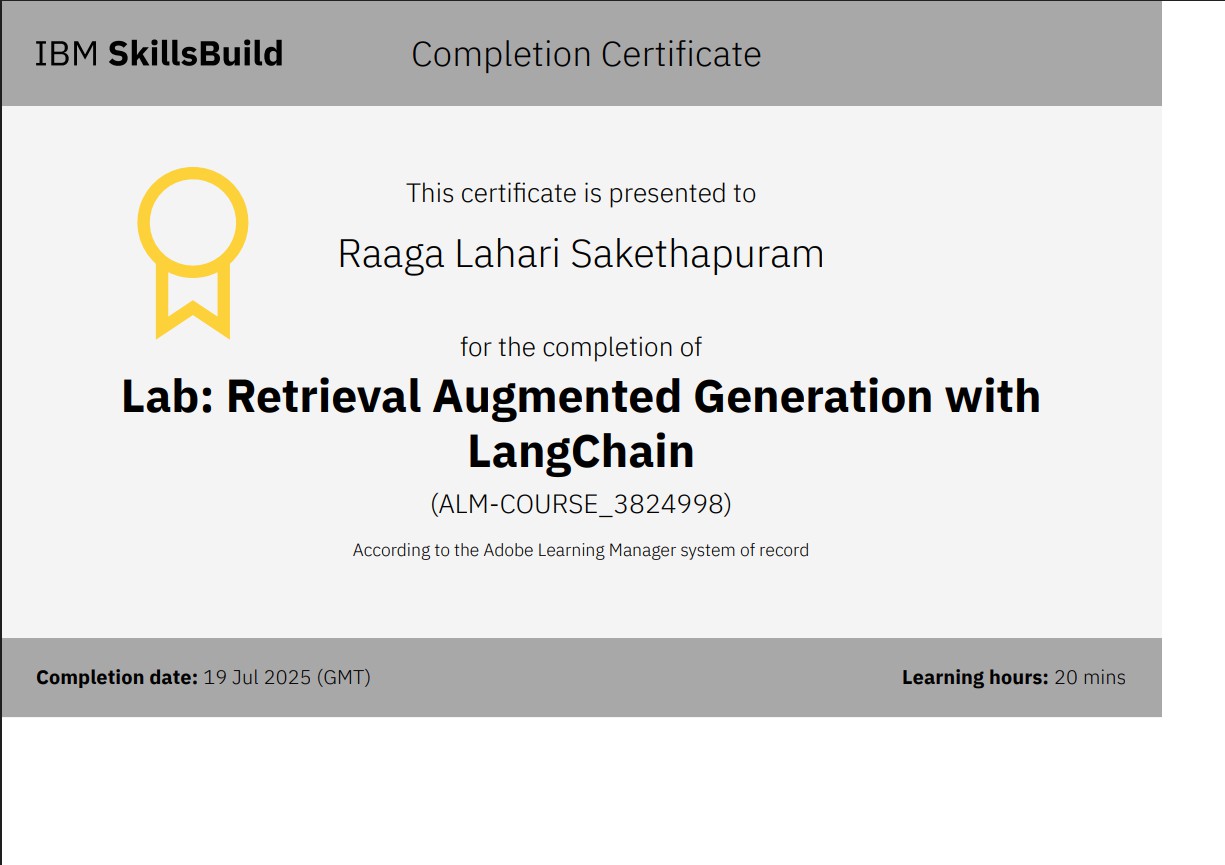
**FUTURE SCOPE**

* - Multilingual & voice-based assistant
* - Mobile app integration
* - Smart bin sensor data integration
* - Eco habit streaks & gamification
* - Partnership with GHMC, Swachh Bharat, etc.



### IBM CERTIFICATIONS

Screenshot (getting started with AI)



RAG LAB certificate

**THANK YOU**

