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# **AICTE-IBM SkillsBuild Project**

## **ECOLIFESTYLE AGENT**

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Greater Noida & Computer Science Engineering**

# OUTLINE

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

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# PROBLEM STATEMENT

Many people want to live sustainably but lack easy access to personalized, reliable guidance on eco-friendly habits, recycling, and green government schemes. The EcoLifestyle Agent bridges this gap with AI-driven, document-grounded support.

## Proposed Solution:

An AI-powered assistant that uses Natural Language Processing(NLP), Retrieval-Augmented Generation (RAG) which delivers document-grounded, easy-to-understand suggestions for sustainable living. It helps users make small, meaningful changes through actionable tips, product recommendations, recycling guidelines, and updates on green policies — all sourced from trusted environmental data.

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# TECHNOLOGY USED

- IBM cloud lite services
- Natural Language Processing (NLP)
- Retrieval Augmented Generation (RAG)
- IBM Granite model

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# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

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# WOW FACTORS

This agent helps users make informed, eco-friendly choices by providing quick access to trusted sustainability insights. It reduces research effort and promotes green habits through personalized, actionable guidance.

Unique features:


- **Semantic search** across sustainability tips, government schemes, and eco-guidelines
- **Auto-summarization** of environmental documents and green policy PDFs
- **Personalized recommendations** for eco-friendly actions and products
- **Behavioral trend insights** based on common queries and environmental priorities




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# END USERS




- Individuals adopting eco-friendly habits
- Students and educators promoting green awareness
- NGOs and community groups
- Consumers choosing eco-friendly products
- Households seeking sustainable living tips
- Urban and rural citizens exploring recycling and schemes

# RESULTS


 IBM watsonx

Upgrade Saumya raj's Account ▾ Dallas ▾  SR

Projects / Eco\_Agent / Agent Lab

Share feedback  β Unsaved  ▾ New agent + Deploy 

Build

AI Model: granite-3-3-8b-instruct ▾  <

Setup





Name

EcoLifestyle\_Agent


Description 92/100

AI agent giving eco-friendly tips, product suggestions & recycling info for greener living.

Icon Placeholder image


   



Agent preview

 EcoLifestyle\_Agent 03:54 PM

Welcome to EcoLifestyle\_Agent

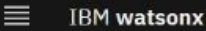
AI agent giving eco-friendly tips, product suggestions & recycling info for greener living.











Type something...  





# RESULTS

 IBM watsonx

Upgrade ?  Saumya raj's Account ▾ Dallas ▾ 

Projects / Eco\_Agent / EcoLifestyle\_Agent [Share feedback](#)   Autosaved 4:23 PM  ▾ New agent + **Deploy**   

**Build**  Model: granite-3-3-8b-instruct ▾  <

Setup ^





Name

EcoLifestyle\_Agent


Description 92/100

AI agent giving eco-friendly tips, product suggestions & recycling info for greener living.

Icon Placeholder image

**Agent preview**





**Sample questions**

How can I reduce energy usage at home? →

Suggest eco-friendly alternatives to plastic bags →

How can I travel in a more eco-friendly way? →

Tell me about government schemes for rainwater harvesting →

Type something...  

# RESULTS

IBM watsonx

Upgrade ?

Saumya raj's Account

Dallas

SR

Projects / Eco\_Agent / Agent Lab

Share feedback β Unsaved 📁 New agent + Deploy 🚀

Build

AI Model: granite-3-3-8b-instruct

<

Setup



Name

EcoLifestyle\_Agent

Description 92/100

AI agent giving eco-friendly tips, product suggestions & recycling info for greener living.


Icon Placeholder image



Agent preview

SR You: 03:55 PM

Are there eco-friendly cleaning products?

 EcoLifestyle\_Agent 03:55 PM

"Hi, I am EcoLifestyle Agent. How can I help you live greener today?"

Absolutely, there are many eco-friendly cleaning products available that are better for the environment and your health. Here are a few recommendations:

- Seventh Generation:** This brand offers a wide range of plant-based cleaning products, from laundry detergent to all-purpose cleaners.
- Ecover:** Ecover makes plant-based powder and liquid laundry detergents, dish soap, and home cleaners.
- Method:** Method's products are biodegradable and come in recycled

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, a help icon, a notification bell, and user account information for 'Saumya raj's Account' in 'Dallas'. Below this, a breadcrumb trail shows 'Deployment spaces / EcoLifestyle / EcoLifestyle\_Agent /'. The main content area is titled 'EcoLifestyle\_Agent' with a green 'Deployed' status and an 'Online' indicator. Three tabs are visible: 'API reference', 'Test', and 'Preview', with 'Preview' being the active tab. A 'New chat +' button is located to the right of the tabs. The chat history shows a user asking 'How can I reduce energy usage at home?' and the agent responding with a greeting and a list of suggestions, including switching to LED bulbs. A text input field at the bottom is labeled 'Type something...'. On the right side, a sidebar titled 'About this deployment' provides details: Name (EcoLifestyle\_Agent), Description (AI agent giving eco-friendly tips), and Deployment Details (ID: 04c97118-15f4-4f..., Serving name: No serving name, Software specification: runtime-24.1-py3.11, Hardware specification: Extra extra small: 1 CPU and 2 GB RAM, Copies: 1, and Tags).

IBM watsonx Upgrade ? Bell Saumya raj's Account Dallas SR

Deployment spaces / EcoLifestyle / EcoLifestyle\_Agent /

### EcoLifestyle\_Agent

Deployed Online

API reference Test Preview

New chat +

You 04:22 PM

How can I reduce energy usage at home?

EcoLifestyle\_Agent 04:22 PM

Hi, I am EcoLifestyle Agent. How can I help you live greener today?

Here are some simple ways to reduce energy usage at home:

1. **Switch to LED bulbs:** They use less energy and last longer than traditional incandescent bulbs.

Type something...

#### About this deployment

**Name**  
EcoLifestyle\_Agent

**Description**  
AI agent giving eco-friendly tips, product suggestions & recycling info for greener living.

**Deployment Details**  
Deployment ID: 04c97118-15f4-4f...  
Serving name: No serving name.  
Software specification: runtime-24.1-py3.11  
Hardware specification: Extra extra small: 1 CPU and 2 GB RAM  
Copies: 1  
Tags

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# CONCLUSION

- Empowers users to live sustainably with minimal effort
- Bridges the gap between environmental awareness and everyday action
- Delivers personalized, document-backed guidance on eco-friendly living
- Supports government and community efforts toward greener futures
- Scalable, adaptable, and future-ready for broader environmental use cases
- Reduces information overload through smart, focused answers

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# FUTURE SCOPE

- Multilingual and Voice-based Support
- Hyperlocal recycling and green scheme data
- Eco-friendly product recommendations with links
- Community and event integration
- Personal carbon footprint tracking
- API access for NGOs and government platforms

# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



Saumya raj

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



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

Verify: <https://www.credly.com/badges/baf5bd45-a3e6-428a-a967-f1e4a85b77ce>



# IBM Certifications

7/16/25, 5:29 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Saumya raj

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 15 Jul 2025 (GMT)

**Learning hours:** 20 mins

# IBM Certifications

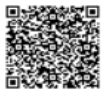
In recognition of the commitment to achieve  
professional excellence



Saumya raj

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



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Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/2c0f2d6d-d77a-4f52-9b2a-ee7eecfa02b5>





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# GITHUB LINK

- [https://github.com/rajsaumyaa/EcoLifestyle\\_AI\\_Agent.git](https://github.com/rajsaumyaa/EcoLifestyle_AI_Agent.git)



**THANK YOU**