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# CAPSTONE PROJECT

## ECO LIFESTYLE AGENT

**Presented By:**

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**College Name & Department :**

**MIT – AOE Engineering , Pune. / Computer Department.**

# OUTLINE

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

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# PROBLEM STATEMENT

An Eco Lifestyle Agent, powered by RAG (Retrieval-Augmented Generation), empowers users to adopt a greener lifestyle through personalized, practical suggestions. It retrieves sustainable living tips, eco-friendly product recommendations, local recycling guidelines, and government schemes from trusted environmental sources. Users can ask natural language questions such as “How can I reduce plastic use at home?” or “What are eco-friendly travel options in my city?” and receive instant, actionable guidance. The agent promotes small daily actions with big environmental impact, making sustainability easy and accessible.

This AI-driven assistant fosters eco-conscious decisions, raises awareness, and helps build a more sustainable future.

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# TECHNOLOGY USED

- IBM cloud lite services
- 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







# WOW FACTORS

This AI-powered Eco Lifestyle Agent goes beyond static advice by using real-time, location-aware data and Retrieval-Augmented Generation (RAG) to deliver personalized sustainability guidance — empowering every user to make eco-smart choices in their daily life, effortlessly.

Unique features:

- Offers location-specific sustainability tips and recycling rules.
- Recommends personalized green products and habits.
- Delivers daily eco-challenges to encourage mindful living.
- Integrates multi-source data from trusted environmental platforms.
- Provides real-time eco-advice using Retrieval-Augmented Generation (RAG).

## END USERS

-  **Corporate Employees** – Professionals aiming to reduce their environmental footprint at work.
-  **Schools & Colleges** – Educators and institutions promoting sustainability among students.
-  **Eco-Conscious Shoppers** – Consumers searching for verified sustainable product alternatives.
-  **Environmental NGOs & Campaigns** – Groups using the agent to raise public awareness.
-  **Health & Wellness Enthusiasts** – People linking green habits with well-being and mindful living.
-  **Government Portals** – For citizen engagement in eco-programs and schemes.

# RESULTS

IBM watsonx

Upgrade ⓘ ⚙️

Vedant Ingle's Account ▾ Dallas ▾ VI

Projects / Eco Lifestyle Agent / Eco Lifestyle Agent

Share feedback ⓘ Autosave on New agent + Deploy ⓘ ⓘ

Build

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

<

Setup

Name

Eco Lifestyle Agent

Description 100/100

Welcome! I'm your Eco Lifestyle Agent, here to help you make smart, sustainable choices every day.

Icon

Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select. +

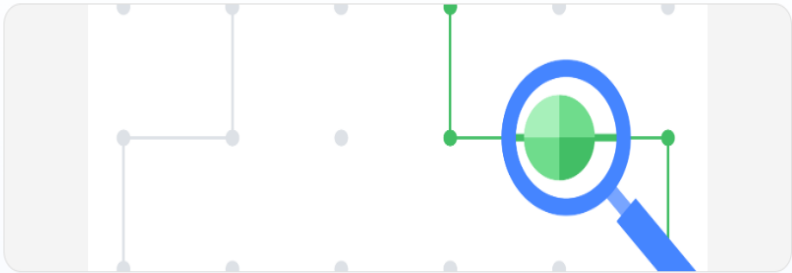
How can I reduce plastic use at home? 🗑️

Agent preview

Eco Lifestyle Agent 04:39 PM

Welcome to Eco Lifestyle Agent

Welcome! I'm your Eco Lifestyle Agent, here to help you make smart, sustainable choices every day.



Sample questions

How can I reduce plastic use at home? →

What are some eco-friendly travel options in my city? →

Can you recommend sustainable products for daily use? →

Where can I find local recycling guidelines? →


Type something... 🔍 ➔





# RESULTS

[Share feedback](#) β Autosave on New agent + Deploy

### Agent preview

 You: 04:40 PM

 How can I reduce plastic use at home?

 Eco Lifestyle Agent 04:40 PM

Absolutely, reducing plastic use at home is a fantastic step towards a more sustainable lifestyle! Here are some practical tips:

- Reusable Shopping Bags:** Always carry reusable shopping bags when you go grocery shopping. This simple swap can significantly cut down on plastic bag usage.
- Bulk Buying:** Whenever possible, buy items in bulk. This reduces the amount of plastic packaging.
- Glass, Metal, or Stainless Steel Containers:** Replace plastic containers with glass, metal, or stainless steel alternatives for food storage.
- Reusable Water Bottles and Coffee Cups:** Carry a reusable water bottle and coffee cup with you. This eliminates the need for single-use plastic bottles and cups.
- Say No to Plastic Cutlery and Straws:** If you don't need them, avoid using plastic cutlery and straws. If you do need them occasionally, opt for biodegradable alternatives.
- Buy Loose Fruits and Vegetables:** Instead of pre-packaged produce, buy loose fruits and vegetables from the bulk bins.
- Natural Cleaning Products:** Use natural cleaning products or make your own using vinegar, baking soda, and lemon. Many conventional cleaning products come in plastic packaging.

# RESULTS

IBM watsonx

Projects / Eco Lifestyle Agent / Eco Lifestyle Agent

Build

AI

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

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Setup

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Name


Eco Lifestyle Agent


Description


100/100

🌱 Welcome! I'm your Eco Lifestyle Agent, here to help you make smart, sustainable choices every day.

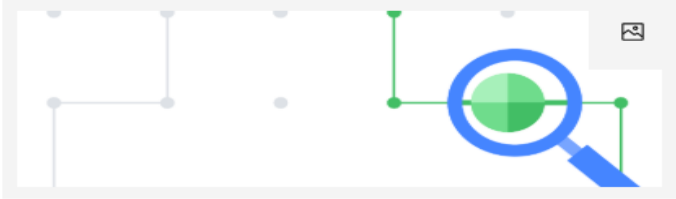
Icon







Placeholder image




Quick start questions

Add up to 4 quick start questions that your users can select.

+


🌱 How can I reduce plastic use at home?













edunet  
foundation


# RESULTS

## Deployed AI Agent

 IBM watsonx


Upgrade ?  Vedant Ingle's Account  Dallas  



Deployment spaces / Eco Lifestyle Agent1 / Eco Lifestyle Agent /      


Eco Lifestyle Agent  Deployed Online

API reference Test **Preview**

New chat +

 You 07:51 PM  
Where can I find local recycling guidelines?

 Eco Lifestyle Agent 07:51 PM  
To find local recycling guidelines, you can start by visiting your city or county's official website. They often have sections dedicated to waste management and recycling. If you're unsure about your location, you can use a tool like Google's "Find my location" feature or ask me to look up your area using the Weather function.  
  
Additionally, Earth911's recycling search is a great resource. You can enter your zip code and search for specific materials to find local recycling programs.  
  
Remember, recycling rules can vary, so it's always best to check with your local authorities or a trusted local source.  
  
[► How did I get this answer?](#)  




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## CONCLUSION

The Eco Lifestyle Agent leverages advanced AI with Retrieval-Augmented Generation (RAG) to empower individuals with personalized, real-time guidance for sustainable living.

By integrating trusted environmental sources, location-based insights, and user-friendly interactions, it makes eco-conscious choices simple and accessible.

This intelligent assistant not only raises awareness but actively drives behavioral change, contributing to a greener, more responsible future.

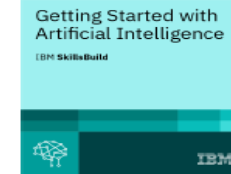
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# FUTURE SCOPE

- Integrate voice assistants for hands-free eco guidance.
- Add multilingual support for wider global accessibility.
- Connect with smart home devices to automate green actions.
- Incorporate AI-driven carbon footprint tracking for users.
- Partner with local governments for real-time eco scheme updates.

# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



## VEDANT INGLE

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 17, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/96eb7e6e-83e3-4194-85b0-3ad13c09c819>



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

VEDANT INGLE

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 22 Jul 2025 (GMT)

**Learning hours:** 20 mins

## GITHUB LINK

- Git hub link :- <https://github.com/vedantingle123/eco-lifestyle-agent>





**THANK YOU**