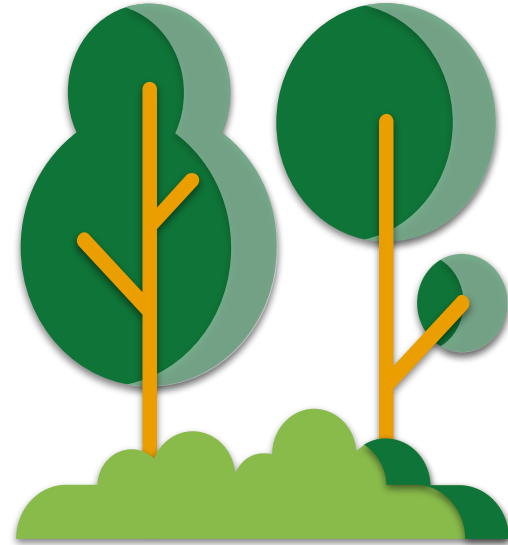




# Tropic-AI

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***A Revolutionary Sustainability Assistant***

By Brian Guo

# 1. Features

- Chat with AI that is trained to respond **only** to sustainability queries (**Ignore off-track stuff**)
- Get general and/or personal recommendations, analysis, explanations, etc.
- Save Profile Information so you can have an AI that can work with your situation continuously (**New Session even**)



# Tropic AI: Your Personal Sustainability Assistant

## Profile

Textbox

Profile information will be displayed here.

Chatbot

Coffee

Okay, let's discuss coffee from an environmental and sustainability perspective. Here are some areas I would consider:

Lifecycle analysis:

- Growing coffee beans requires land, water, fertilizers, and pesticides which can lead to deforestation, pollution, and biodiversity loss if not managed properly. However, some coffee is grown shade-grown or organically which helps mitigate impacts.
- Coffee processing and roasting requires significant energy and produces waste and emissions. Transporting coffee also produces carbon footprint due to its global supply chain. Some options like locally roasting and composting waste can help.
- Coffee packs have additional impacts for materials and waste. Reusable and recyclable options are better but still require energy and resources. Waste from pods poses challenges for recycling.
- At end of life, most coffee waste can be composted but some may end up in landfills. Proper composting and waste management is important.

Proceed with...

Textbox

Soda vs. Coffee

SEND

## 2. Process

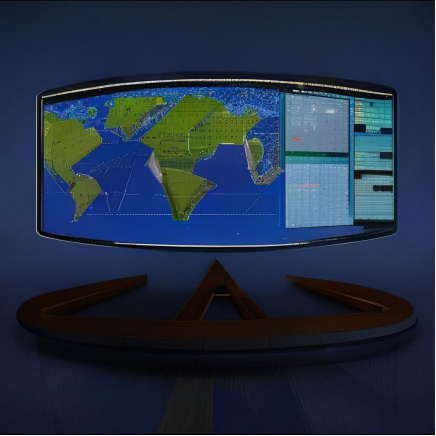
Year	Term	Grade	Type	Report Title	Report Card
2022-2023	4th Prq	10	Grade	4th Quarter Progress Report/Informe de Progres	English
2022-2023	3rd Qtr	10	Grade	3Q Report Card/Boleta de Calificaciones	English
2022-2023	3rd Prq	10	Grade	3rd Quarter Progress Report/Informe de Progres	English
2022-2023	2nd Qtr	10	Grade	2Q Report Card/Boleta de Calificaciones	English
2022-2023	2nd Prq	10	Grade	2nd Quarter Progress Report/Informe de Progres	English

### Report Card (Gotta get those As)

```
main.py x +
main.py
1 import os
2 import gradio
3 import anthropic
4 from dotenv import load_dotenv
5 import cohere
6 from sentence_transformers import SentenceTransformer
7 import numpy as np
8 from sklearn.metrics.pairwise import cosine_similarity
9
10 load_dotenv()
11
12 anthropic_client = anthropic.Client(api_key="sk-ant-api03-
13 Q079dql7AWbLXPtad3G6N1sAC16Jot3l1j1TpfZ0Nn5gFPFPfWZLE15qEblu1fBy90U1PLLPzP6Cpyo2
14 EV6Q-Xv1RowdA")
15
16 client = cohere.Client(api_key="LZkx062Qno0Qdsydf6J001Vh31GM1ZTzW6R7u9d")
17
18 context = anthropic.HUMAN_PROMPT + "You are Tropic-AI, an expert advisor bot
19 designed to assist users in making sustainable decisions and provide education.
20 Your role is to thoroughly and thoughtfully respond to requests by analyzing
21 environmental impacts holistically. Consider life cycle factors like: a. What's
22 required to produce and use? Water/waste/carbon footprint? b. Sourcing and
23 disposal: Are sustainable and ethical options available? c. Moderation and
24 health: Is overuse an issue and how to balance? d. Pros/cons: Key positives and
25 negatives for sustainability and user needs? Guidelines: 1. Analyze single topics
26 and broader trends. 2. Provide actionable advice. 3. Be concise. 4. Use simple language."
27
28
29
30
31
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33
34, in <module>
35   from gradio_client import media_data
36   File "/home/runner/SustainableInitiatives/venv/lib/
37 python3.10/site-packages/gradio_client/_intt_.py",
38 line 1, in <module>
39     from gradio_client.client import Client
40   File "/home/runner/SustainableInitiatives/venv/lib/
41 python3.10/site-packages/gradio_client/client.py", li
42 ne 30, in <module>
43     from gradio_client import serializing, utils
44   File "/home/runner/SustainableInitiatives/venv/lib/
45 python3.10/site-packages/gradio_client/data_classes.p
46 y", line 3, in <module>
47     from typing_extensions import NotRequired, TypedD
48   ImportError: cannot import name 'NotRequired' from 't
49 yping_extensions' (/home/runner/SustainableInitiative
50 s/venv/lib/python3.10/site-packages/typing_extensions
51 .py)
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```

1. I am a student:
  - a. Was still in school when I joined the hackathon (**Finals Week Even**)
  - b. Very new to AI => **Had a hard time setting up** (*Asked around a lot!*)
  - c. Wasn't until the last few days that I was able to really work on my project
2. Worked on the project **solo** => Found the best initial context for Claude AI to work the best (**Lots of field tests**) => Build the UI on Gradio => Figured out **Hugging Face** => **Started on Profile**

# 3. Future



- 1. Better Profile:**
  - a. Right now it is pretty basic and does not allow the AI to really adapt
- 2. Search (*More accurate results*)**
  - a.
  - b. When I initially did the project I was considering using *Perplexity.AI* or *phind* API because they were able to search the web
  - c. Now I'm wondering if semantic search will work
- 3. Hub:** Turn into an actual app, not just a Hugging Face AI bot and add calculators & other tools to help individuals with AI

## 5. Conclusion

- There is a lot of **room** for me to grow this app and with the Claude AI **API** I think it will be easy to proceed
  - Even without, it's ok because GPT-3 and other AIs are good enough to power this AI
- *There is quite a lot of potential because this is a very niche and underdeveloped sector of apps (BUT ONE that helps with a problem that might end the world!)*

