

Ecowatt

Introduction

Welcome to 'Ecowatt', a comprehensive tool designed to help individuals and organizations of all types contribute to saving our planet by transitioning to renewable energy resources. Whether you're a homeowner, business executive, or government agent, our app provides tailored solutions to meet your energy needs and sustainability goals.

Features

1. Energy Calculator

Functionality: Users input their monthly energy usage and select their state. The app retrieves state-specific energy prices via an API.

Results Provided:

- Required solar system power
- Roof surface area needed for installation
- Installation cost
- CO2 emission reduction per year
- Annual savings
- List of local solar providers with details and links

Backend: Getting energy prices using dictionary I created in my django views file, using maths to calculate everything. Using google places api frmm rapid api to get local solar providers. Rapid api provides the code like ondemand.

2. Integrated Map

Functionality: *Utilizes the Leaflet API to display wind speed, solar irradiation, and solar system providers at any location.

Features:

- Pop-up information about wind speed and solar irradiation
- Pins showing solar system providers with detailed information

Backend: Used leaflet for map and their pop ups. Used openweatherapi for wind speed, NREL for solar data (in java script), google places api from rapid api for solar providers(using python code I got from rapid api).

3. News Feed

Functionality: Provides the latest news on renewable energy through an integrated API.

Features:

- Real-time updates on renewable energy developments
- Articles and news from various sources

Backend: I got some news api and i fetched using python in views file

4. Custom Chatbot

Functionality: An interactive chatbot with knowledge of renewable energy.

Features:

- Answering user questions about renewable energy
- Providing guidance and information on various topics

Backend: I used ondemand to make my agent by feeding it 6 book about the topic of renewable sources and solar energy. I fetched it in python views with code provided by ondemand.

5. Educational Pages

Functionality: Offers in-depth information on the importance of renewable energy.

Features:

- Real statistics and data
- Insights into why renewable energy is crucial for sustainability

How to Use

1. Energy Calculator Page:

- Enter your monthly energy usage.
- Select your state.
- View results including solar system requirements, costs, and local solar providers.

2. Integrated Map:

- Navigate to your location on the map.
- Click on pins to view details about solar system providers and local environmental data.

3. News Feed Page:

- Browse the latest articles and updates on renewable energy.

4. Chatbot:

- Ask questions related to renewable energy.

- Get instant answers and advice.

5. Educational Pages:

- Explore articles and statistics to learn more about the impact of renewable energy.