

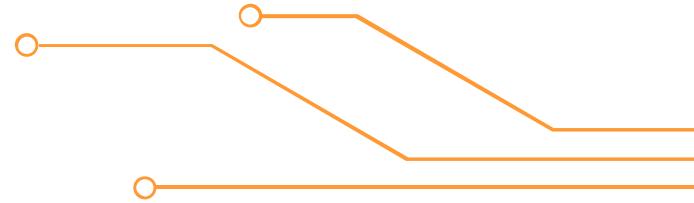
Eco Engage Portal

Team 03

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OBJECTIVE



01 Raise Awareness

Raise awareness about climate change through comprehensive information, engaging content, and real-time emissions data to emphasise the urgency of environmental conservation and the importance of collective action.

02 Engagement and Participation

the project drives user engagement via content creation, events, and partnerships, motivating contributions to sustainability with gamification and rewards.

03 Impact Tracking & Contribution

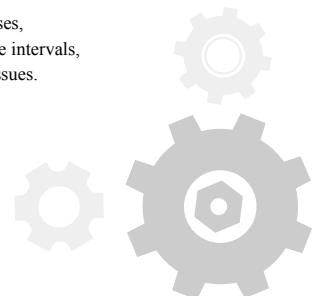
Enable users to measure their environmental impact through carbon footprint calculation, personalised emission reduction recommendations, and progress tracking, while providing opportunities for monetary contributions to tree plantation efforts.

04 Real-Time Data Integration

Integrate real-time emissions information on greenhouse gases, allowing users to monitor emissions levels over varying time intervals, enhancing understanding and awareness of environmental issues.



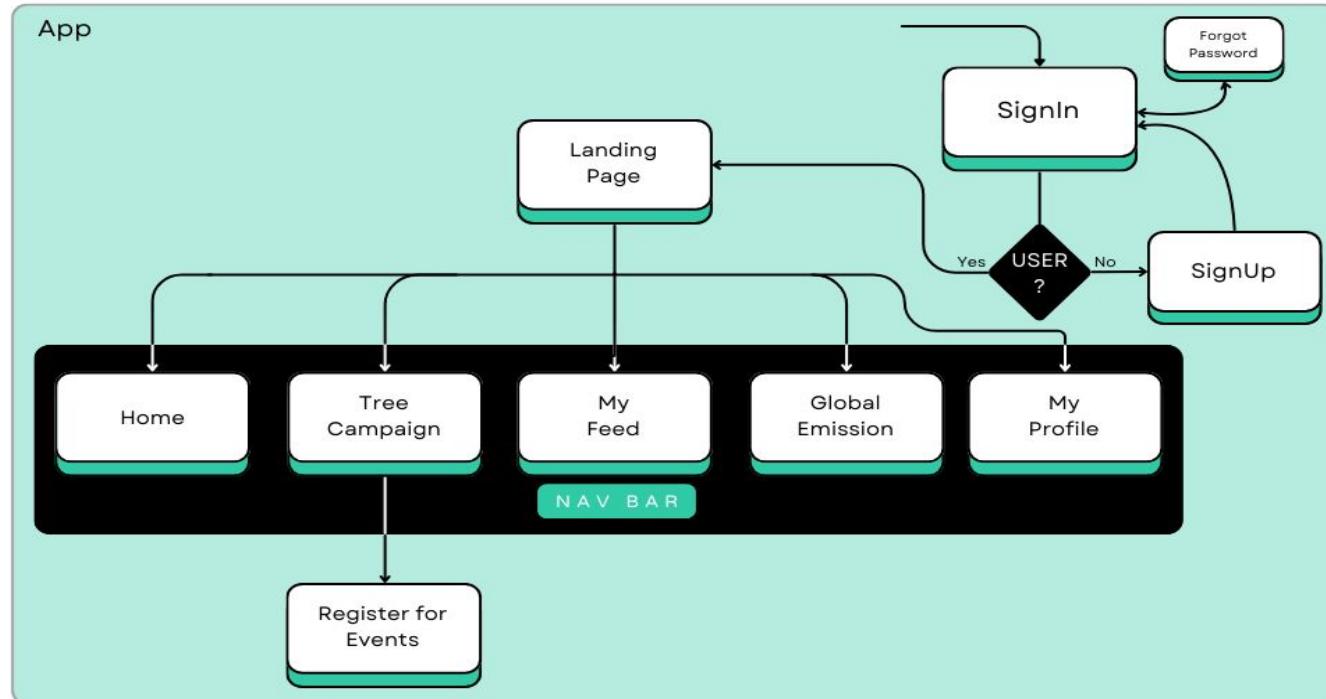
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ECOENGAGE

FLOWCHART





Project Description

The Eco-Engage Portal is an online platform designed to raise awareness and promote action on climate change. It offers a wide range of features and functionalities to engage users in environmental initiatives and sustainability efforts.

The portal integrates real-time emissions information about the various greenhouse gases, users can view how many million tonnes of Methane, Carbon Monoxide, Nitrogen Dioxide and Ozone are emitted of varying time intervals (Yearly, Monthly, Weekly and Daily). We are using [<https://api.v2.emissions-api.org>] for this data, which is an open API with very detailed statistics.

Events and workshops related to climate change are showcased on the platform's events calendar, and users can collaborate with businesses and organizations on climate change projects. User authentication and profile management features ensure a personalized experience, with admins having the ability to manage user posts and comments effectively.

Overall, the EcoEngage Portal aims to empower individuals and communities to take meaningful action towards mitigating climate change and building a more sustainable future.



Additional Features





1. Map Integration using Leaflet**: Implementing interactive maps using Leaflet allows users to visualize the location of events and workshops related to climate change. This feature enhances user experience by providing a spatial context to the events, making it easier for users to find and participate in activities happening in their vicinity.
2. Location-Based Functionality**: The integration of maps enables location-based functionality, allowing users to search for events based on their geographical proximity. Users can filter events by city or region, making it convenient to discover relevant activities happening nearby.
3. Real-Time Emissions Data**: Leveraging external APIs, such as [\[https://api.v2.emissions-api.org\]](https://api.v2.emissions-api.org), provides users with access to detailed statistics on greenhouse gas emissions. By displaying real-time emissions information, users gain insights into environmental impact and can make informed decisions about reducing their carbon footprint.
4. Image Uploading: Integrating image uploading functionality using Multer allows users to enhance their posts with visual content. Users can upload images related to their climate change initiatives, events, or projects, making their posts more engaging and informative.

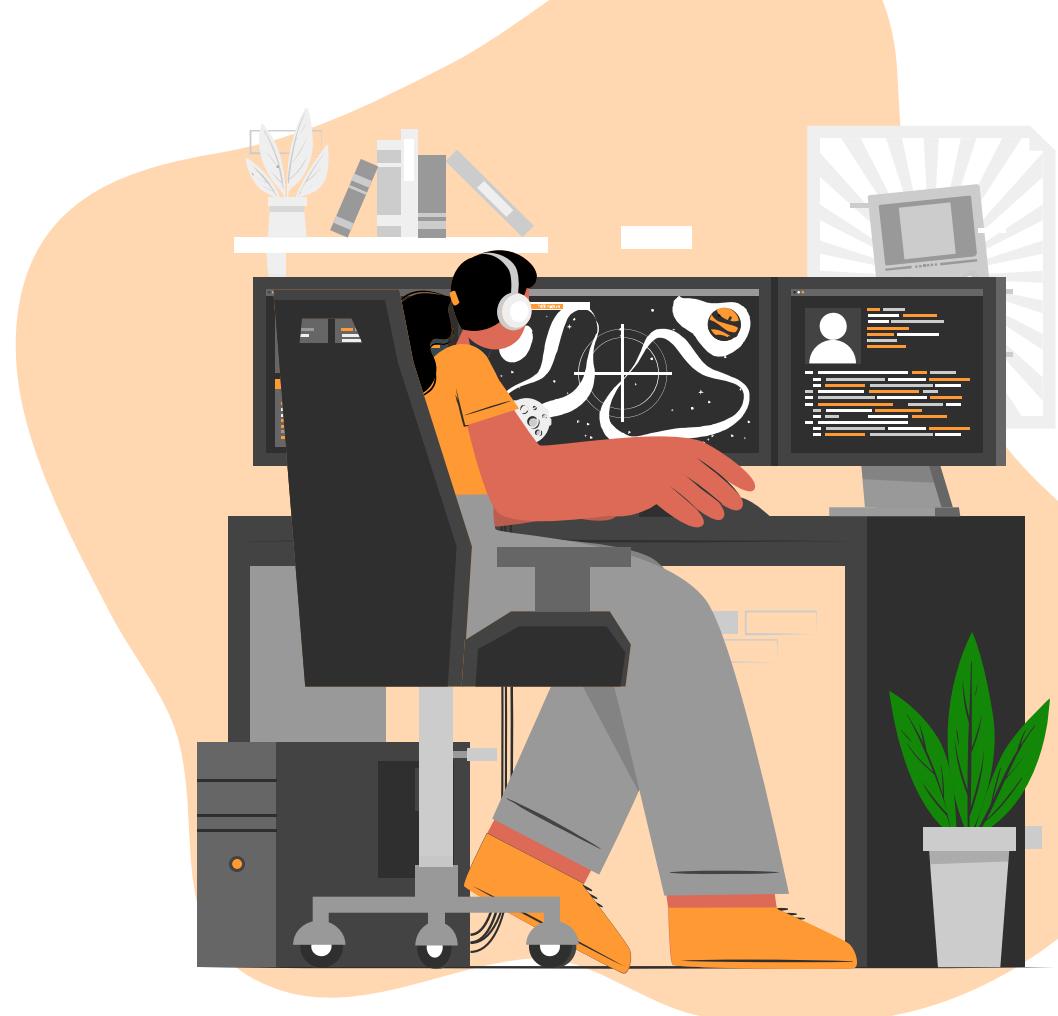
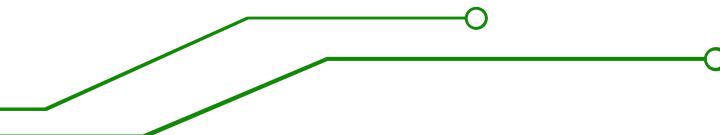


5.WT Token Authentication**: Implementing JWT token authentication enhances platform security by ensuring that only authenticated users can access certain features and perform sensitive actions. It provides a secure mechanism for user authentication and authorization, safeguarding user data and interactions.

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Complexity of Features





1. Map Integration with Leaflet**: Integrating interactive maps using Leaflet requires expertise in frontend development and spatial data visualization. It involves handling geographical data, implementing map layers, markers, and popups, and integrating with external APIs for geocoding and routing.
2. Location-Based Functionality**: Implementing location-based functionality involves complex backend and frontend development to enable geospatial queries, filtering, and rendering of events based on user-defined locations. It requires integration with geolocation services and database optimization for efficient spatial queries.
3. Real-Time Emissions Data Integration**: Integrating real-time emissions data from external APIs involves handling large datasets and complex API requests. It requires backend development skills to fetch, process, and display emissions statistics dynamically on the platform in a user-friendly format.
4. Image Uploading with Multer**: Implementing image uploading functionality using Multer requires backend development to handle file uploads, storage, and retrieval. It involves frontend integration for user interface elements, such as file input fields and image previews, and backend validation to ensure file integrity and security.



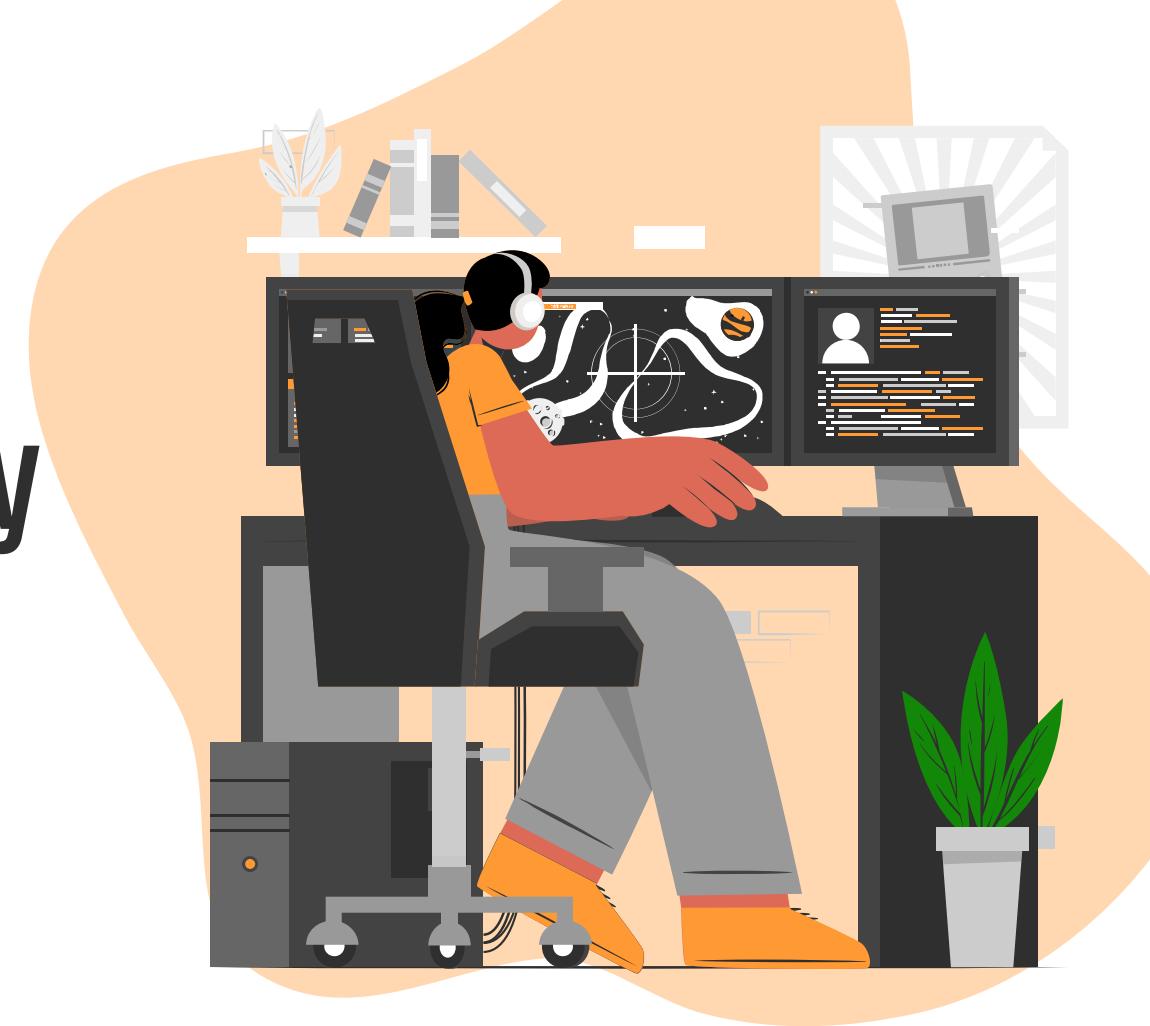
5.WT Token Authentication**: Implementing JWT token authentication involves backend development to generate, validate, and manage tokens securely. It requires frontend integration for user authentication flows, token management, and error handling. Additionally, it involves backend middleware for protecting routes and enforcing access control policies.

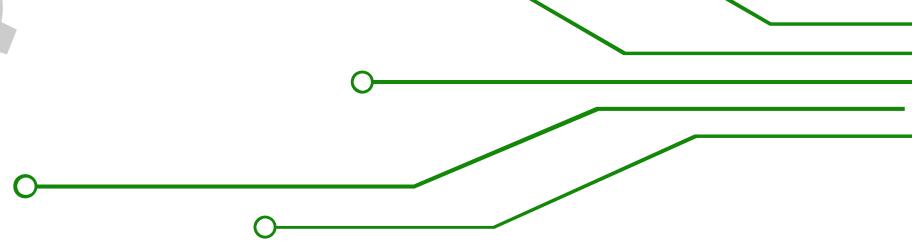
Overall, the additional features and complexity of implementation enhance the functionality and user experience of the EcoEngage Portal, making it a comprehensive platform for promoting climate change awareness and action.

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API Complexity





Complex API Design:

- **Comments-to-Posts Mapping:** Developed a sophisticated API architecture to establish a seamless relationship between comments and posts. This involved designing endpoints and data structures to efficiently map comments to their respective posts, enabling users to engage in meaningful discussions within the platform.
- **WT Authentication:** Implemented robust JWT (JSON Web Token) authentication mechanisms to ensure secure access for every user. By generating and validating tokens, we established a trusted authentication framework that authenticates users and authorizes their access to protected resources, safeguarding the integrity and confidentiality of user data.

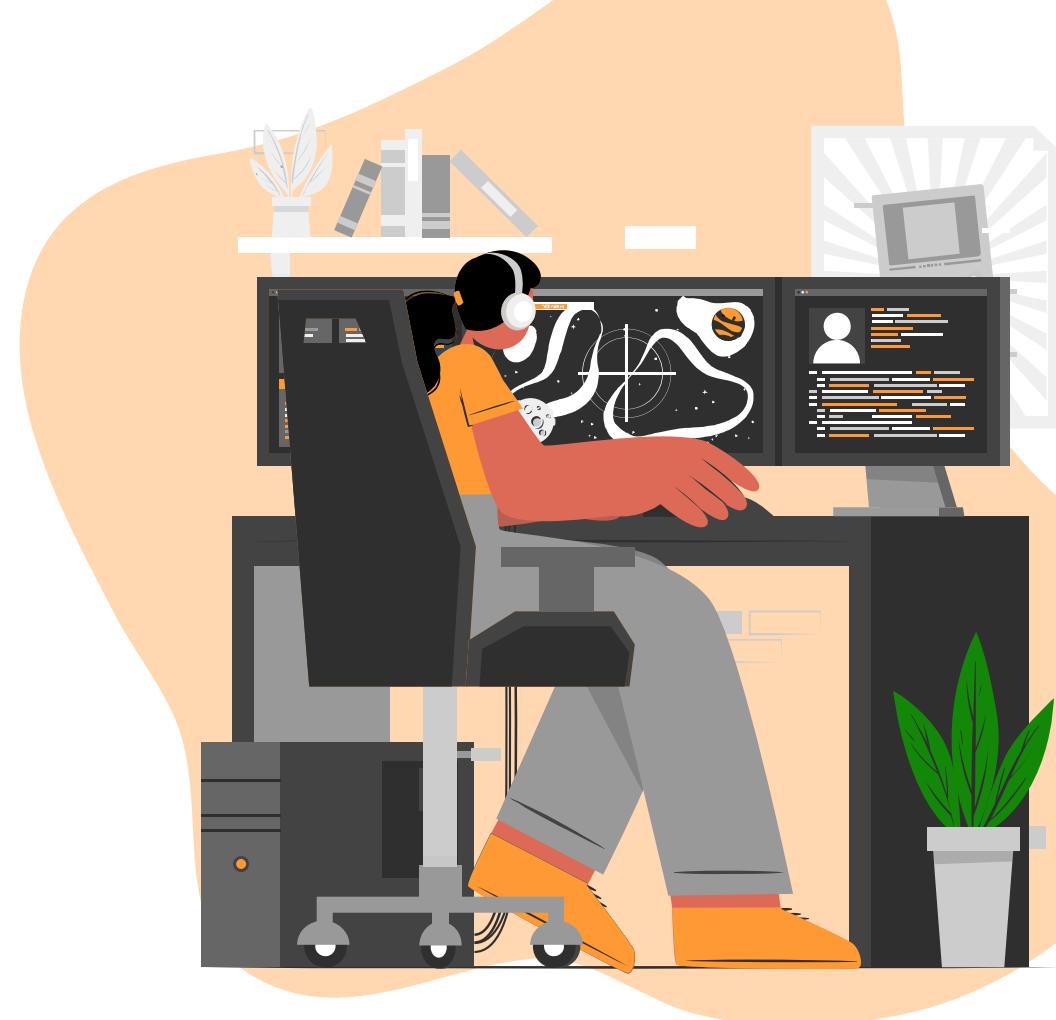
Achieving Networking:

- **Interactivity through Comments and Likes:** Fostered dynamic user interactions by enabling users to engage with posts through comments and likes. This networking feature facilitated community engagement and collaboration, allowing users to express their opinions, share insights, and support initiatives related to climate change and sustainability. Through comments and likes, users were able to contribute to ongoing conversations, amplify impactful content, and build a sense of community within the platform.

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Screenshots





Eco Engage

localhost:5173/signUp

Paused



A scenic landscape photograph showing a lake in the foreground with rocky shores. A small, rustic wooden cabin sits on stilts on the right side of the lake. The background features a range of mountains with patches of snow and dense forests of trees with autumn foliage in shades of orange, yellow, and red. The sky is filled with dramatic, white, billowing clouds.

Sign Up

First Name *

Last Name *

Email Address *

Password *

Confirm Password *

SIGN UP

[Already have an account? Sign in](#)

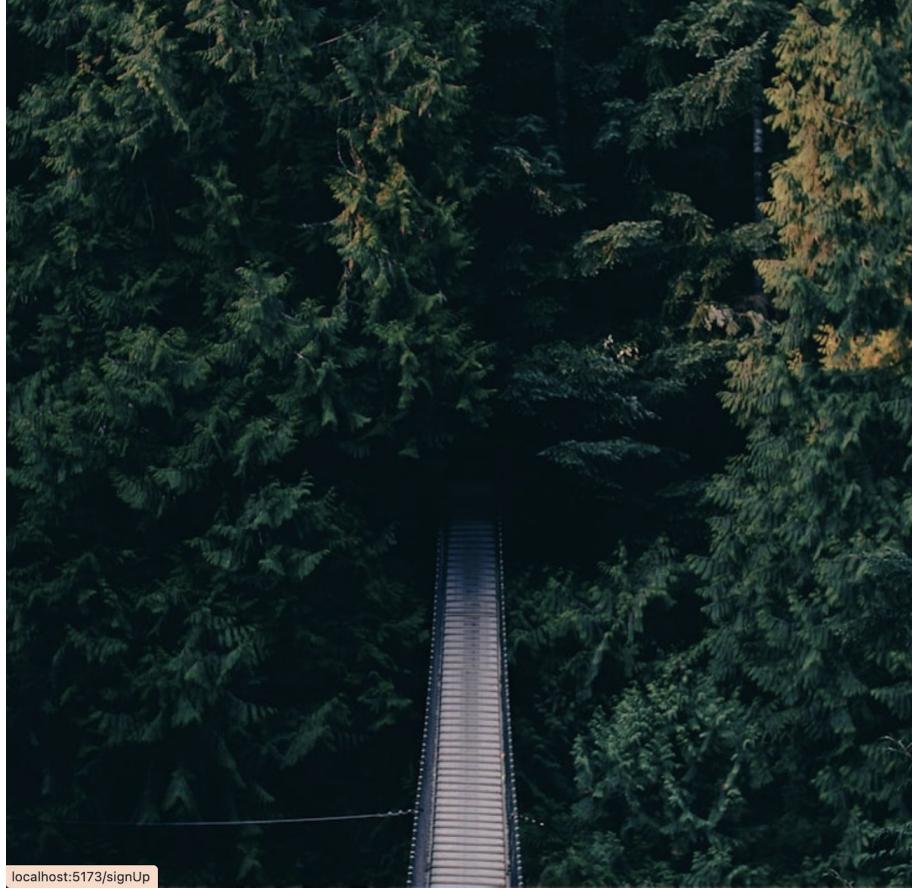
The page displays a sign-up form with five input fields: First Name, Last Name, Email Address, Password, and Confirm Password. Each field is accompanied by a required asterisk (*). The Password and Confirm Password fields include eye icon buttons for password visibility. A large green "SIGN UP" button is positioned below the input fields. At the bottom right, there is a link for users who already have an account, reading "Already have an account? Sign in".



Eco Engage

localhost:5173

Paused



localhost:5173/signUp

Sign In

Email Address *

Password *

SIGN IN

[Forgot Password?](#)

[Don't have an account? Sign Up](#)



"Protecting our planet is not a choice. It's a necessity."

[Tree Campaign](#)[My Feed](#)[Global Emissions](#)[My Profile](#)



"Climate change knows no borders. It affects us all."



Tree Campaign

Plant a tree and help save the planet. Join our tree plantation campaign today!



My Feed

Stay updated with the latest posts on sustainability and eco-friendly living.



Global Emissions

View the emissions statistics for different greenhouse gases over a time period.



My Profile

View and update your profile information along with your preferred language selection

Every Penny Counts



Every Penny Counts

Clean Air Task Force

The Clean Air Task Force is a US-based non-governmental organization that has been working to reduce air pollution since its founding in 1996. It led a successful campaign to reduce the pollution caus...

Carbon180

This environmental nonprofit has a simple but radical goal: accelerating the development of carbon removal technologies that would take carbon dioxide out of the atmosphere and lock it away for hundre...

TerraPraxis

TerraPraxis is a UK-based nonprofit aiming to find innovative ways to meet the globe's growing energy needs, with a special focus on advanced nuclear power, which is neglected in the climate funding l...

Good Energy Collective

Good Energy Collective does outreach to US communities and politicians to help build broad support for advanced nuclear power, which, remember, is neglected in the climate funding landscape....

Future Cleantech Architects

This Germany-based organization is also pretty young. Its aim is to promote innovation in Europe's hard-to-decarbonize sectors by running key programs in, for example, zero-carbon fuels, industry

Good Food Institute

The Good Food Institute works to make alternative proteins (think plant-based burgers) competitive with conventional proteins like beef, which could help reduce livestock consumption. It engages in sc...



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Carbon180

This environmental nonprofit has a simple but radical goal: accelerating the development of carbon removal technologies that would take carbon dioxide out of the atmosphere and lock it away for hundreds of years or more. It works toward that goal of carbon removal (or “negative emissions”) through policy advocacy on Capitol Hill. The approach has reaped dividends with the passage of legislation — like the Inflation Reduction Act and the Infrastructure Investment and Jobs Act — that included billions in research and development for carbon removal.

Why should I donate?

Scientists agree that we'll need some deployment of carbon-removal technologies to keep the planet habitable. Carbon removal generally has been underfunded, in part because the tech is pretty new, though it's been catching up fast. Carbon180 can play an important role by investing in entrepreneurs, by boosting public awareness of carbon removal as necessary tech, and especially by advocating for more federal and state support. Since a lot of the momentum for carbon removal has come from the tech community, there's been a focus on offsets and private investment, leaving government advocacy somewhat underprovided. So it makes sense for impact-minded donors to focus on a policy advocacy group like Carbon180.

[Donate Now](#)

simple but radical goal:
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atmosphere and lock it away for

to US communities and
t for advanced nuclear power,
climate funding landscape....

ke alternative proteins (think
plant-based burgers) competitive with conventional proteins like beef,



EcoEngage Portal

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Community Greenery Project

Join us in planting trees around the neighborhood to improve air quality and beautify the area.

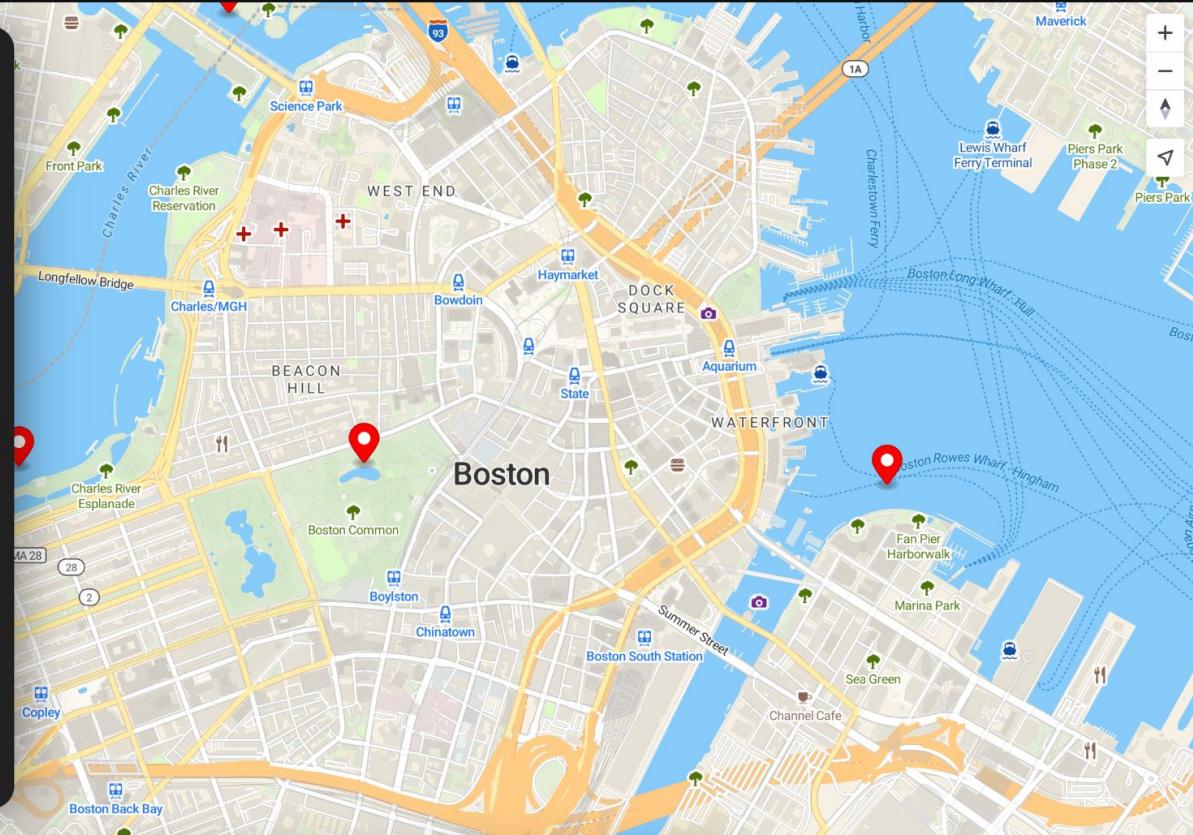
[LEARN MORE](#)



Waste Management Seminar

Learn about the importance of recycling and how to properly manage waste in your community.

[LEARN MORE](#)





Start Date

04/17/2022



End Date

04/21/2022



SEARCH

Community Cleanup Day





Recycling Workshop



Waste Management Seminar

Learn about the importance of recycling and how to properly manage waste in your community.

[Register Now](#)



EcoEngage Portal 🌱

Create PostCard

Sakshi



Are you a beach or a mountain person?

Content

I attended the event encouraging cleaning of beaches, Here's a snapshot!

0 likes





EcoEngage Portal 🌱

Create PostCard

Add title for your post

Add content for your post

Start a post, try writing about the event you attended 🎉

Choose File No file chosen

Create Post!

Explore your feed...

Sakshi Wadaskar



The Importance of Forest Conservation

Content

Forests play a critical role in maintaining the balance of our ecosystem...

❤️ 2 likes



Create PostCard

Content

Urban gardening is increasingly recognized as a sustainable way to improve food security...

2 likes



Sakshi Wadaskar

Hi, I am excited to know more about it more, let's catchup?



Daniel Mathew

Amazing, Jane, I love your inspiring posts.



Amy Rhodes

What a lovely day to start my day with, reading all your posts, and comments, gives me



Jane Smith

Sure, let's meet up, lovely seeing you all show interest in my post!





EcoEngage Portal

Create PostCard

Add title for your post

Add content for your post

Choose File No file chosen

Create Post!

Daniel



Hello.....

Failed to update the post. You're not authorized to make any updates to this post.

Content

Welcome folks!! Tell us about the events y'all attended. Don't forget to share 'Picturesque Snapshots'....

Failed to update the post. You're not authorized to make any updates to this post.

⚠ Failed to update the post. You're not authorized to make any updates to this post.

X





4,500,097,084

million tonnes of

Methane

has been produced over the past one

Year



9,333

million tonnes of

Carbon Monoxide

has been produced over the past one

Month



Welcome to the Eco Engage Portal! 🌿

My Events



Jane Smith

Email

jane@gmail.com

First Name

Jane

Last Name

Smith

Bio

sample bio

[CHANGE PASSWORD](#)

Language

English

English

Spanish

Hindi



THANKS!

