Team Details

a. **Team name: Ch4**
b. **Team leader name: Siddhi Shrivastava**
c. **Problem Statement:**

18: Tell a Climate Story:

Over the last several decades, a huge amount of climate data from numerous sources has been collected. This data is freely available to the public, but making sense of this vast amount of data is not easy! Your challenge is to use the open-source data on the U.S. Greenhouse Gas Center website to tell a compelling story about climate change.

Brief about the idea:

Interactive comic with AI voice chatbot trained on climate data

- Comic-style storytelling: engaging visuals that climate-related highlights effects on planet and life
- Interactive data visualizations to engage users with the story based on real-world data
- Interactive AI Voice chatbot trained on climate-related data, can answer questions, walk through the website
- Carbon calculator to calculate individual impact

A story that speaks the reality and measures our current state down to every tonne and inspires to make an individual impact.

But a story is helpless if it can't shake a human heart. We want to touch their hearts and make them beat with purpose to take action.

Calculate their own GHG footprint using our GHG calculator app. Based on their score the app will suggest lifestyle changes to lower their GHG emissions.

Opportunities

a. How different is it from any of the other existing ideas?

Our website Combines Comic-style storytelling + Interactive data visualizations making a comic come ALIVE. Most climate-related projects focus either on science-fiction comics or pure data. The narrative here is supported by real datasets that users can engage with.

Target audience

1. Young, who enjoy comics, and read about important stuff but lack the technical skills to make sense of long research papers and datasets.
2. Those who read sci-fi comics, and research papers and want something more fun along with the plain technical analysis.

Opportunities

a. How different is it from any of the other existing ideas?

Phases of the story + supported with interactive visualizations

1. Problems due to climate change. E.g., ongoing floods in India, wildfires and drought in all parts of the world.
2. Sources of the climate change problems.
3. Effects on all life forms.
4. Forecasting the future of GHG trends and effects on the earth and its tenants.
5. Realistic approach to lower GHG levels.

The flow of the story supported by data visualizations ensures emotional engagement with factual confirmation that all of this is not made up. THIS IS HAPPENING RIGHT NOW.

User will find an immersive webite that can talk with them about climate issues and answer their doubts through INTERACTIVE AI VOICE CHATBOT

Opportunities

b. How will it be able to solve the problem?

Each of our team members has come across various humans who were quite unaware of the threats Earth's current temperature is causing, casually blaming it on the unpredictability of weather and never understanding the cause behind it.
Education is the first step but making it fun and accessible is the foremost.

By presenting complex climate data in a **simplified, visually appealing format**, we can engage a wider audience, especially those who may find raw data intimidating. The **interactive data dashboards** allow users to explore GHG trends, sources, and impacts, helping them understand the problem in detail. In case of doubts, users can **ask the AI Voice Chatbot to clarify on topics related to climate.**

Action: The **Carbon Footprint Calculator** empowers individuals to measure their own contribution to GHG emissions and take actionable steps toward reducing it.

Opportunities

c. USP of the proposed solution

Entertainment-driven approach to present concrete solutions to tackle climate change and make an impact at an individual level.
Motto is to build an emotional connection with the user and to take actions to save the only planet we have (until NASA launches public space services)

•**Unique Blend of Storytelling and AI Voice Chatbot**: A fantasy comic dealing with important real world issues where users can talk and ask questions, bridging the gap between education and emotional impact. Since education should not be limited to school syllabus.

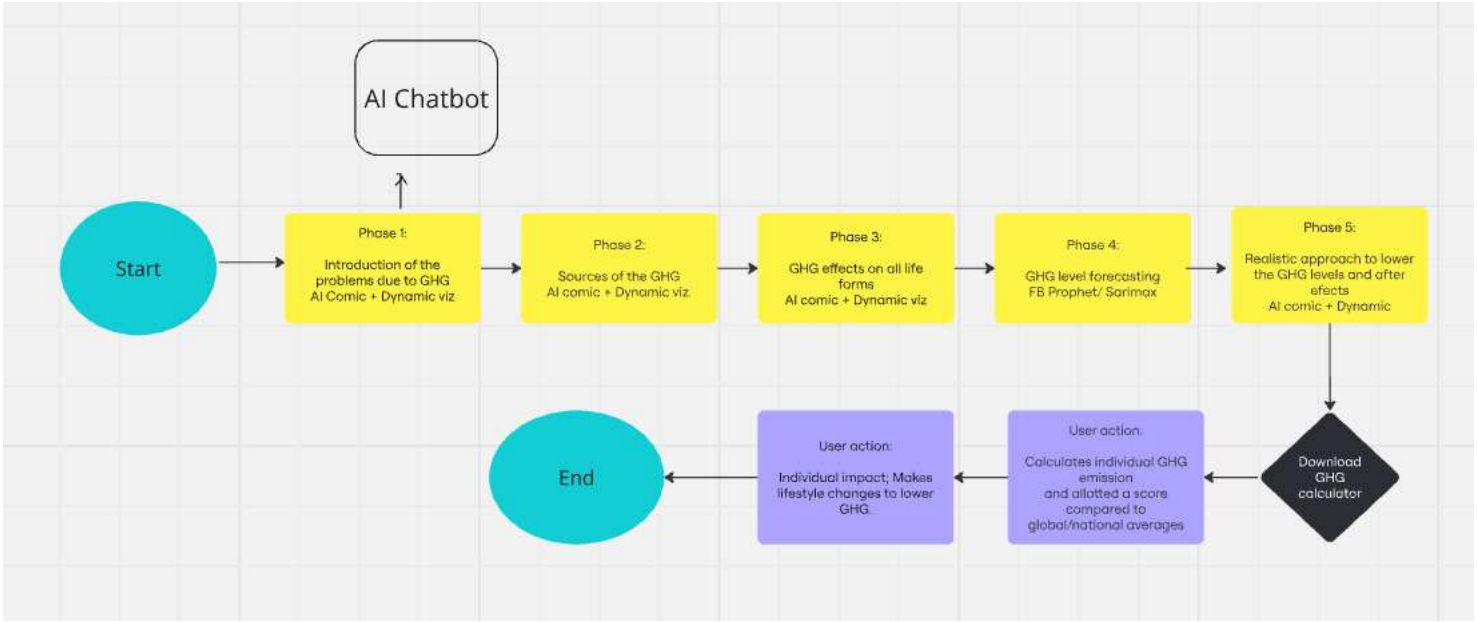
•**Interactive Visualizations**: allows users to engage with real-time data, making the story dynamic and data-driven.

•**Personal Action**: The Carbon Footprint Calculator provides personalized recommendations, turning information into action for the user.

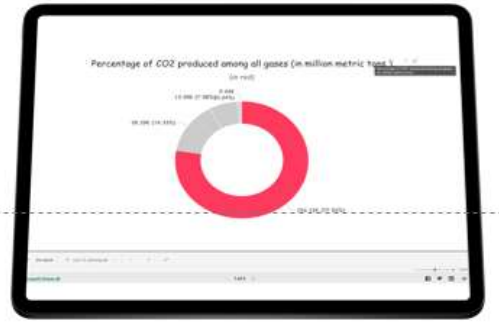
List of features offered by the solution

- **AI-generated comic art;** human-generated story
- **AI Voice chatbot** trained on current world climate data
- **Dynamic visualizations on real-world climate data**
- Dynamic map visualizations
- Filters: country, year, region-specific
- **Earth temperature** – API
- **Natural disasters count** –API
- **Carbon level** – API
- **WebApp**: Carbon Footprint calculator (individual impact)
- **Responsive layout**; can be operated on all devices. (Currently desktop only)

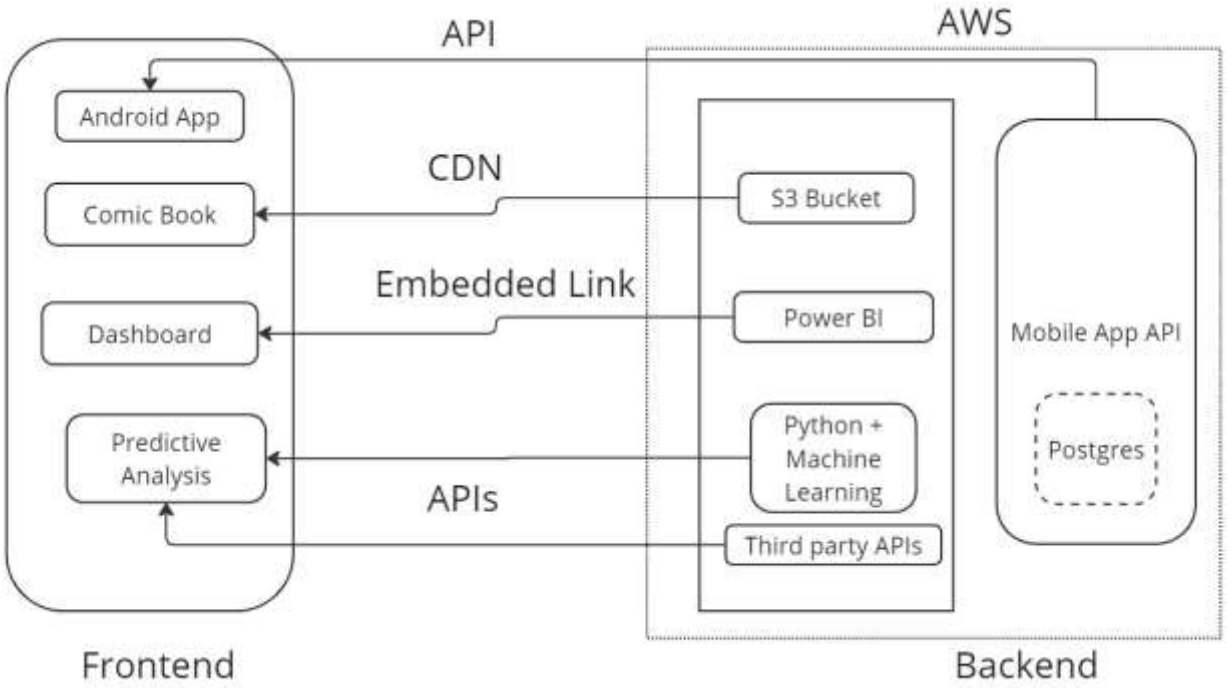
Process flow diagram or Use-case diagram



Wireframes/Mock diagrams of the proposed solution (optional)



Architecture diagram of the proposed solution



Technologies to be used in the solution

Analytical tools

Python
Power BI
Excel

UI/UX Design
Figma
AdobeXD
Framer

Frontend

React.js
CSS
HTML
JavaScript

Mobile App Frontend
React native

Backend

Python
Django
FastAPI

Deployment

Render/ AWS

AI Comic
Huggingface
Dashtoon

Editing

Premiere pro
Canva

AI
LLM
Rag

Estimated implementation cost (optional)

Hosting: INR 10k -15k
AI comic subscription:
USD 20

Snapshots of the prototype

Prototype Performance report/Benchmarking

Feature	Prototype	Industry Standard	Comparison
Page Load Time	3-4.5 seconds	2-3 seconds (optimal)	**Slightly Slower** (due to rich media)
Mobile Optimization	92%	90% (Common threshold)	Above Average
Interactivity (Story + Comic)	Highly interactive	Static informational sites	More Engaging
Scroll Depth (Comic)	75% (Approx.)	50-60% average	Above Benchmark
Charts Load Time	2 seconds (Approx.)	2-3 seconds	Meets Standard

Additional Details/Future Development (if any)

Provide links to your:

1. GitHub Public Repository
2. Demo Video Link (3 Minutes)
3. Final Product Link

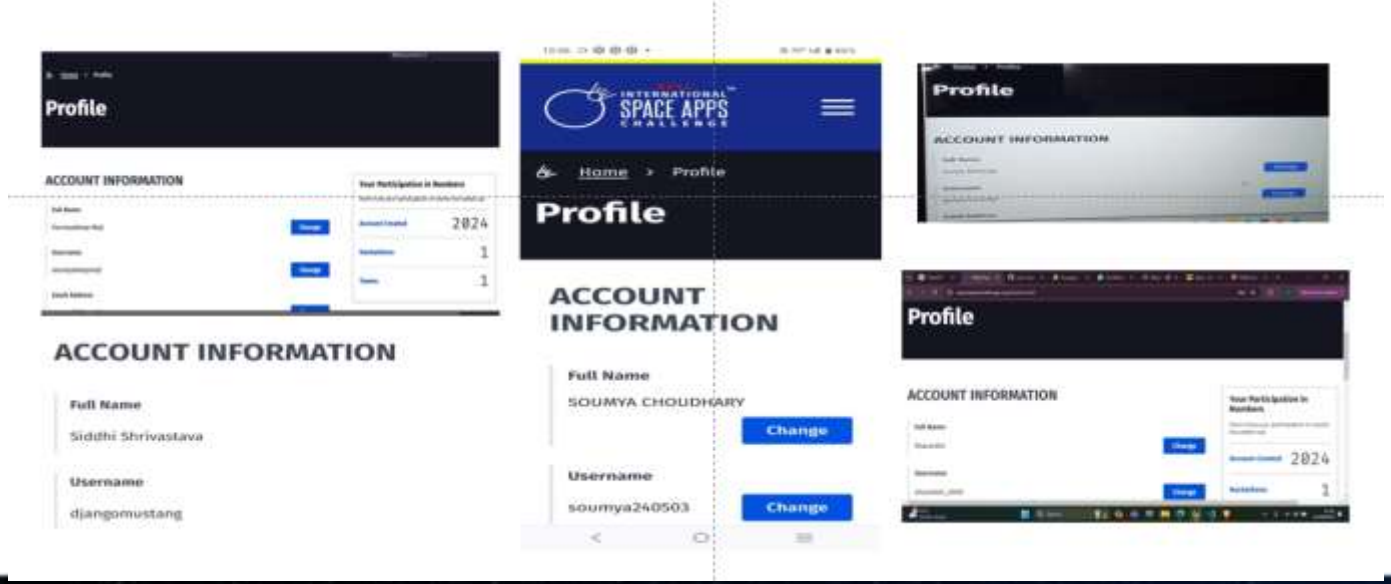
GitHub: DjangoMustang GitHub repository

Video link: YouTube demo video

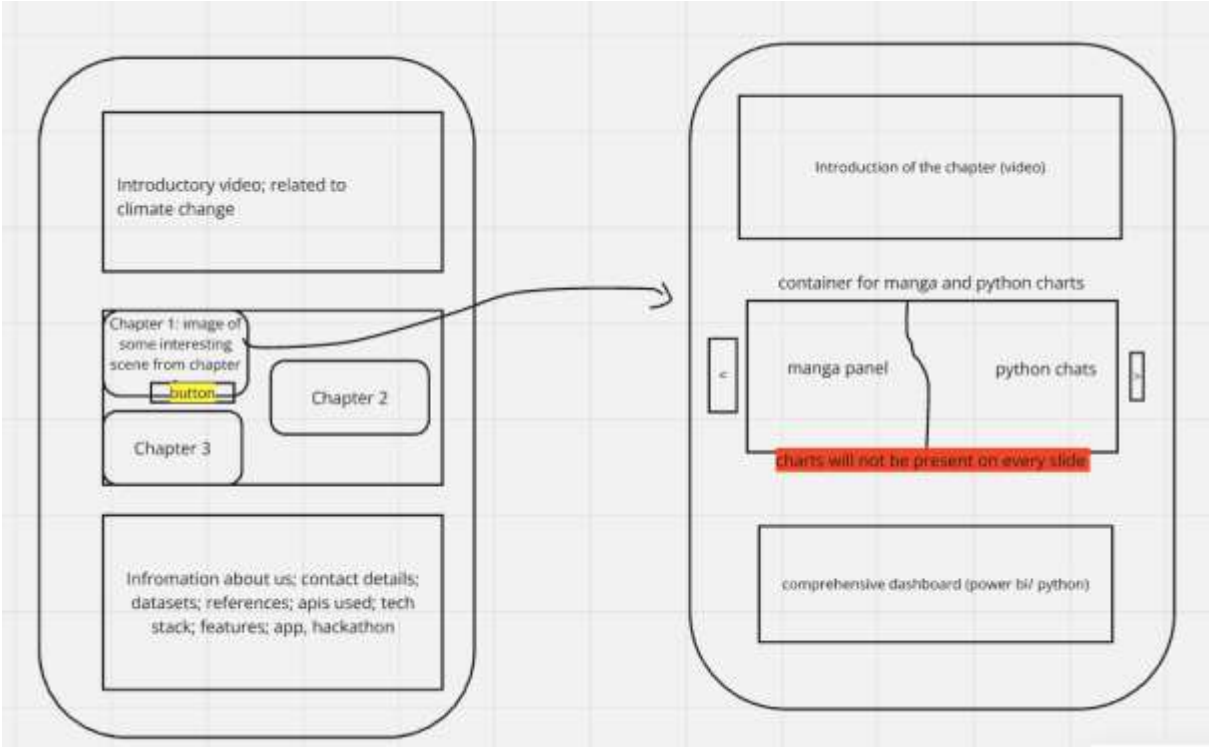
Website link: Interactive comic website

Proof of Registration on https://www.spaceappschallenge.org/nasa-space-apps-2024/2024-local-events/noida

1. Add screenshots of your registered profile on the above mentioned link.
2. Screenshots to be added for all of the team members.



UI design


Introductory video; related to climate change
Chapter 1: image of some interesting scene from chapter
button
Chapter 2
Chapter 3
Infromation about us; contact details; datasets; references; apis used; tech stack; features; app, hackathon
Introduction of the chapter (video)
container for manga and python charts
manga panel
python chats
charts will not be present on every slide
comprehensive dashboard (power bi/ python)

NASA SPACE APPS NOIDA

Innovation partner H2S

NASA Space Apps Noida 2024

World's Largest Space & Science Hackathon

Thank You