Holistic Climate Change Website

Project Theme: Axe 2 – Climate Transitions

High Level Description: A website that presents climate data in an accessible and engaging way, helping users understand the ongoing changes in their region. It has data about past years and even eras visualized on a 3D globe, on top of other features such as graphs and engaging visualizations.

Functional Requirements:

1. Data Visualization:

Present climate data on a 3D globe, with interactive features allowing users to zoom, pan, and rotate the globe.

Additional Details: Provide various modes for visualization, such as historical climate data, projections, and comparisons. Include engaging and informative visualizations, such as heatmaps, line graphs, and animated charts. Furthermore, the 3D globe visualization is not just a static representation but an interactive tool. Users can zoom in and out, rotate the globe, and click on specific regions to access detailed climate data for that area.

2. Region-Specific Data:

Users should be able to select their region or area of interest to access localized climate information both in region and time.

Additional Details: Provide data for different time scales, including daily, monthly, and yearly data, and the ability to compare data between years or eras.

3. User Interaction: Data Filters and Search:

Enable users to interact with the visualizations in order to filter the data or search for specific information.

Additional Details: Implement a search feature for users to find specific historical climate events. In fact, users will be able to customize the data they see, choose specific time frames, regions, or variables of interest (temperature, precipitation, CO2 levels, etc.) Interactive elements like sliders, dropdown menus, and checkboxes will allow users to control and explore the data. Users can also hover over data points for more specific information.

4. Data Sources and Updates:

Clearly indicate the sources of climate data used on the dashboard.

5. Data Download and Sharing:

Allow users to download climate data in various formats, including CSV or PDF reports.

Additional Details: Provide social media sharing options for users to share interesting findings and insights.

Non-Functional Requirements:

1. Performance:

The website should load and respond quickly to user interactions, even when dealing with large datasets.

2. Data Security:

Implement robust security measures to protect sensitive climate data and user information.

3. Usability and User Experience:

The dashboard should be intuitive and user-friendly, with clear navigation and informative tooltips. It should be visually appealing and engaging to hold users' interest.

4. Cross-Browser Compatibility and Responsiveness:

Ensure that the website works well on popular web browsers, including Chrome, Firefox, Safari, and Edge, while being responsive and usable on a variety of devices.

5. Data Accuracy and Reliability:

Guarantee that the climate data presented is accurate, up-to-date, and sourced from reputable institutions.

6. Compliance with Privacy Regulations:

Ensure the project complies with data privacy regulations if applicable.

7. Documentation:

Maintain comprehensive documentation for both users and developers, explaining how to use the system and how it is built.

MoSCoW Classification of the Requirements:

Functional Requirements:

Must Have	Should Have	Could Have	Will not Have
• Data Visualization • Region Specific Data • User Interaction: Data Filters and Search	Data Sources and Updates	Data Download and Sharing	-

Non-Functional Requirements:

Must Have	Should Have	Could Have	Will not Have
• Usability • Performance • Security • Privacy • Data Accuracy	Compatibility	Documentation	-