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Overview

The objective of the project is to assess the feasibility of building wind farms in Connecticut as a means of satisfying the state's energy needs. The analysis would involve a comprehensive evaluation of wind patterns and related factors based on data from sources such as the U.S. Energy Information Administration and the U.S. Wind Turbine Database. Using heat maps to analyze the wind behavior in the state or individual cities would provide valuable insight into where these wind farms should be constructed. The project aims to make this data more accessible and user-friendly for stakeholders and support Connecticut's goal of reaching zero carbon emissions. The project would use technologies from the MEA/RN stack and other relevant technologies to accomplish its goals.

Stakeholder Analysis

Residents of Connecticut would be the main stakeholders in this project. The decreasing carbon emissions from wind-turbine-generated energy would lead to a less polluted environment and, thus, a healthier environment for the residents of Connecticut. Furthermore, the Connecticut government would have a large stake in this project because they will be using this data and providing the funding to build wind turbine farms. Expert scientific researchers and applied science data users would also hold a large stake in this project, as they would be the ones to analyze the data that is consolidated by the project and make proper deductions on the best areas to build a turbine farm.

Undeniably, NASA would also have a stake in this project, as they would be the ones to provide data for the wind patterns that the turbines are based on, which means that the reliability and success of this project depend primarily on NASA.

Tech Stack

We'll be using the MEA/RN stack, which comprises MongoDB, Express, Angular or React, and Node. We will also be using GitHub for project management as well as Microsoft Azure to host our final project.

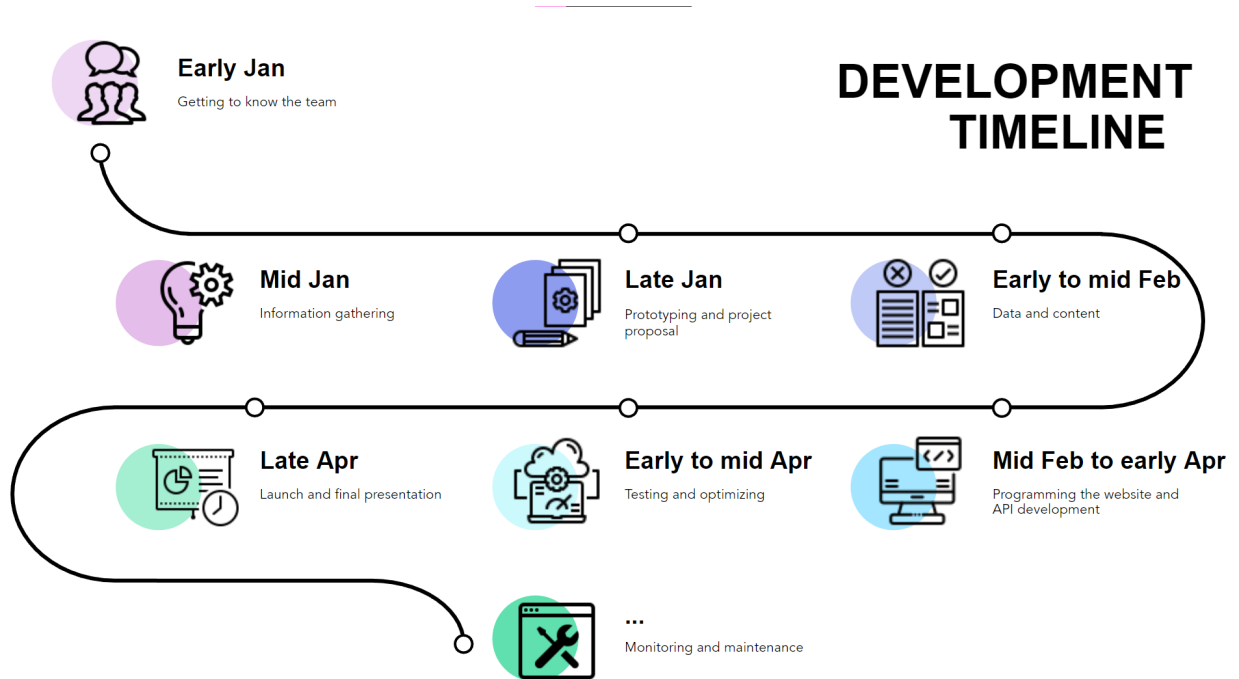
Functional requirements:

Our website will enable users to retrieve and display data from a database as well as from our custom API. The site will include a search and filter system for data retrieval and presentation through visualizations such as charts, graphs, and tables. The website will also be optimized for accessibility and responsiveness across devices.

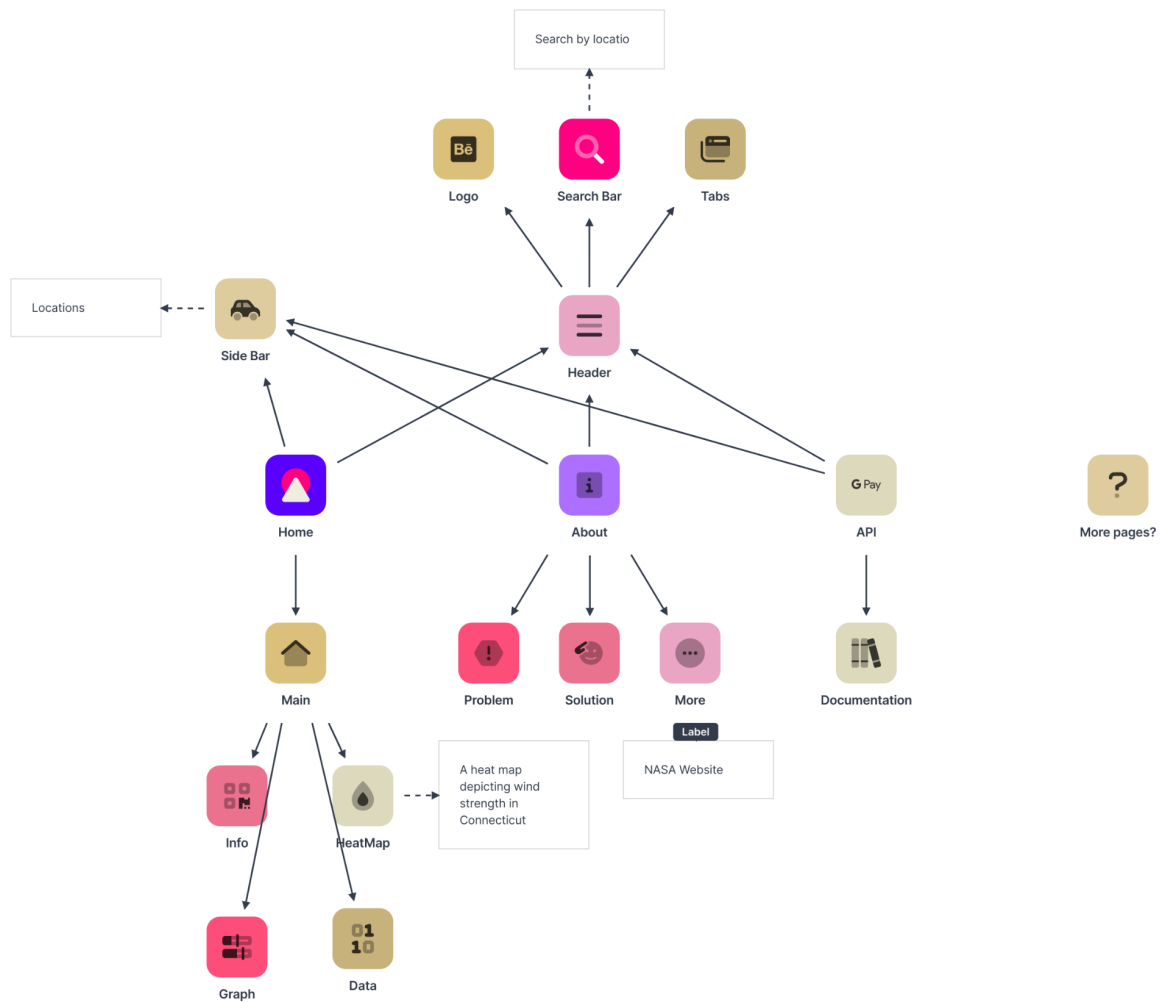
Non-functional requirements:

Our clients should be able to clearly see the information that we have listed on our page, and the labels that would direct the users to different pages should be properly formatted and clearly explained so the users always know where to go. The datasets we display on the page should be formatted in a way that is user-friendly and easy to read.

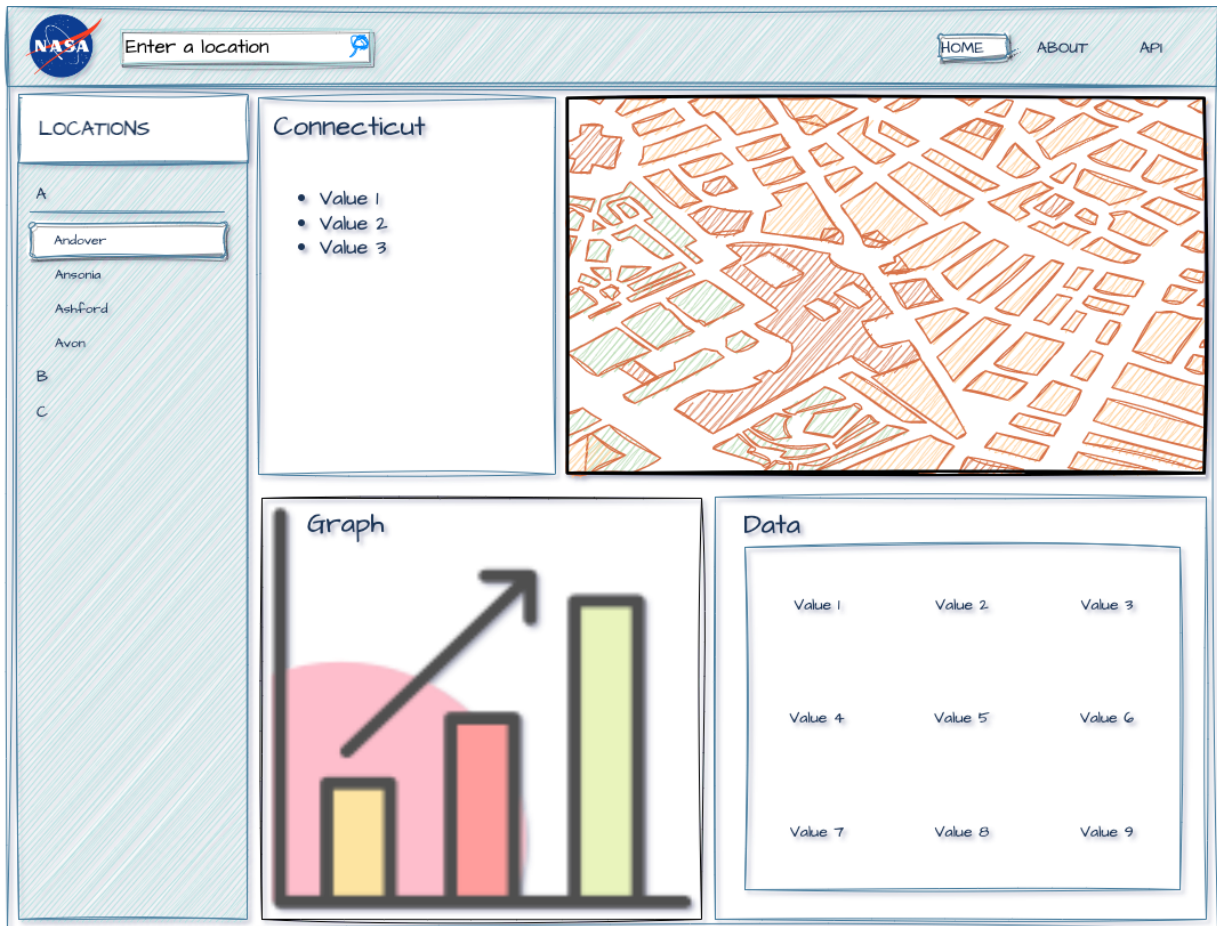
Estimated project schedule:



Sitemap:



WireFrame:



[HOME](#)[ABOUT](#)[API](#)

LOCATIONS

A
B
C



The problem

The 'Renewable Energy' project which we are proposing is related to exploring the potential of Wind Energy generation in the State of Connecticut. The project aims to analyze wind patterns and other wind related factors in order to predict future wind strength in order to make suggestions on areas that are best suited for building wind turbine farms. Connecticut aims at reaching zero-carbon emissions from power production by 2040 and has the potential to considerably expand its wind farm network, thus making it a viable and appropriate location for the project to be based on.



Our solution

This website.



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