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Final Project PUI Write Up

Part 1:

Using a dataset about weather in the United States for each season, I will display an interactive map of the United States. There will be different input modes for months and seasons. When clicking on the state it will show a visual of an outfit mood board based on the respective weather data. The mood board visual is not meant to tell the users what they exactly should pack, but is meant to give a general idea of the types of things that would be practical for the weather. Sometimes out of genuine curiosity or a need for planning to travel to a state we have never been to, we are unsure of what type of clothes to pack. States differ in temperature vastly, so it is not always certain what weather to expect. This interactive map of the United States called, “Seasonal Outfit Map,” will serve as a helpful, quick, and simple tool to solve that uncertainty. Users who know what season they are traveling within, can easily select a season and click on a state to get specific weather information. The specific weather information that is provided to users by the website are: average temperatures, average high temperatures, average low temperatures, and finally the visual of the outfit mood board. In order to ensure that my website will be engaging for users, I added themed animations to each season that is selected from the dropdown menu. The target audience for this tool is mainly focused on United States citizens who like to travel and plan. However, this tool also would be helpful for international citizens traveling to the United States, unsure of what to pack for clothing. Because the website is so simple, people of all ages are welcome to use it.

Part 2:

- Open Site and read instructions
    - Interaction Type: Scroll
    - If the user is using a mobile phone or tablet, scroll down to see a card which gives very basic and brief information on how to use the tool. If a user is using a regular desktop, they are able to see the instructions to the right of the US map without scrolling.
- Choose a Season
    - Interaction Type: Dropdown Menu
    - Click on the dropdown menu in the upper left corner, click on it, and choose an option: Summer, Fall, Winter, or Spring.
- (Desktops Only with mouse) US State Pop-ups
    - Interaction Type: Hover
    - If the user is using the desktop, they can hover over the US states to see a popup of each of the states name and average temperature. This isn’t possible on touch devices however, all information is still available without hover.
- Outfit idea and weather Information Card
    - Interaction Type: Click and Scroll

- Click on any state of your choosing, and its respective information will show on the Outfit idea card. The outfit mood board visual is not cut off on the card, you are able to scroll down within the card to see the full format.

Part 3

- The main external tool I used was p5.js.
  - Using p5, I created simple visuals for each season in the background of the map.
  - I wanted to use p5 because I would be able to turn the visuals into animations.

- External Map Svg
  - I used an open sourced svg image of the US Map Link
  - I wanted to use this svg because it would eliminate the manual labor of drawing the exact paths of each and every state. Using this svg, I was able to edit the structure of the svg code with ids, classes, and functions. I additionally used css styling to change its style.

- Weather Datasets
  - I used a free dataset from the NOAA National Climatic Data Center: Link and Extreme Weather Watch Link
  - I needed to use these dataset to get archival information about each seasons weather, because weather forecasts can only predict a couple days into the future. Thus, my website relies on past data.

Part 4

Through my iterations, I realized that the initial design of my website needed to be changed to be more minimal and intuitive. I previously had buttons for each month which I replaced using a dropdown menu. Additionally, I added abbreviations to each state to make them easier to locate. I had to lower my scope and use just seasons, rather than months as a parameter. Finally, I did not use a geomap filled gradient, because it visually clashed with the animations behind as well as the state abbreviations.

Part 5

The main struggle I encountered was finding a way to provide the temperature data information for each season of the United States. I spent quite a long time trying various APIs, only to realize that historical temperature data is extremely expensive, whereas the free functionality of the APIs such as current weather were inapplicable to the goals of my project. Additionally, the APIs all organized information on a city basis rather than state basis.