Title: **Weather X Wardrobe Application**

Summary

Weather X Wardrobe Application is aimed at providing users with comprehensive weather information tailored to their specific needs by harnessing a user-friendly interface and a real-time weather tracker system. Our application allows users to choose locations and view their current weather conditions, along with additional data such as average annual temperature and sunlight duration,etc.One of the standout features of our application is its ability to provide outfit recommendations based on the current weather conditions. By leveraging advanced algorithms and visualization tools, we aim to provide users with practical and relevant advice on how to dress appropriately for the day ahead and ensure they stay comfortable and prepared for whatever the weather may bring.Our overarching goal is not only to develop a user friendly platform that provides weather information, but also an indispensable tool for individuals to navigate daily life with confidence and ease.

Description

We want to create a platform that allows users to access and display multiple different bookmarkable locations to see their weather information. The user is able to access the weather information and see multiple different statistics for each place that they have bookmarked. Additional features will include visualization of weather metrics of past and present data for each bookmarked location. Also, another main feature will be including the ability for users to include the items in their wardrobes to the application. With the inclusion of each user's wardrobe, we will create a feature that recommends pieces of clothing to wear depending on the weather statistics for the bookmarked locations.

Usefulness

Our Weather X Wardrobe Application is useful because not only does it provide details about current weather conditions, including average annual temperatures and sunlight durations, but also provides the user with personalized clothing suggestions based on these real-time weather conditions. Allowing users to dress comfortably and appropriately for the weather. Enhancing daily life navigation. One of the things all of us experienced during winters in urbana is the fact that all of us struggled with layering and figuring out the appropriate clothing for that day. Some days 2 layers with just a jacket would be fine, while others we would end up with frozen fingers. Understanding when a sneaker would work as opposed to a snow boot, especially for people

who aren't familiar with the weather, is a huge challenge. Tackling this kind of challenge and providing a solution for it was a driving factor for choosing this application.

Realness

Some data sources available for weather data are the World Weather Repository from kaggle. It has 40 features on weather information for capital cities and it is updated everyday. It is in a csv format. Other options include the Weather Dataset. It is also in csv format and is updated every sunday. It includes hourly weather information. We have the option to do a daily and a near-real time database. Wardrobe data would be allowing the user to have their custom wardrobe fed into the application. The application would include stock data for common clothing items and the weather/season they would fit in. Since the user is allowed to change the wardrobe data, it would have to be setup with triggers to handle edge cases (for example, where the user doesn't have appropriate clothing).

Functionality

The core function of our web application is displaying detailed and accurate weather information of the locations chosen by users. Our intuitive user interface makes it convenient for users to navigate and access the information they need efficiently with just a few clicks. Our application will provide a high-quality and pleasing visual experience, allowing users to intuitively immerse themselves in the current weather conditions and see the difference between different locations and times clearly. Through crafted visualizations, users will be able to grasp key weather information at a glance, enhancing their understanding of the atmospheric conditions in their selected locations. By adding favorite cities to their personal lists, users can lip through forecasts for different cities with a quick swipe.Users can also delete and rearrange cities in the list with just a few taps. One of our primary featured functions is providing recommended weather-based outfits suggestions for users, respective to their own personal wardrobe. Whether traveling to unfamiliar cities or facing sudden weather changes, our program ensures that users dress comfortably and appropriately.
(more info to add) (Visualizations and Predictive Modeling)

1.Users can search for a specific city/location and bookmark it to their respective list of locations and also remove it.

Users can easily search for a specific city or location using our intuitive search function. If the input is invalid , our application will return error messages. Once the system finds the input location, it will return the weather information, including temperature,wind speed, future forecast.etc. On this page, Users can add a city to their personalized list of bookmarked locations with just a single click. When users need to view the weather information of bookmarked cities, they just need to click on the existing list.This feature enables users to

quickly access the weather information for their frequently visited or favorite destinations without the need for repeated searches.

2.Based on data from weather for a specific day and a database for each user that contains their wardrobe (# shirts, pants, sweaters, jackets, etc), give a recommendation for an outfit (combination of shirt, pant, jacket, etc) based on the weather in that location for that specific day.

Users will be able to add their wardrobe with associated statistics (level of warmth, formality, etc.) and they will be able to access a recommendation system that determines which pieces of clothing from their wardrobe would be the most appropriate depending on the weather statistics. For example, recommending a rain jacket for a location with current rainfall.

3.Provide visualization of the weather statistics of each month over years

Provides the users with the ability to create visualizations of specific weather statistics of their bookmarked locations. Can allow for users to determine their own trends or just for appearance. The weather data will come from climate data from various different locations and will allow for statistics such as temperature, weather conditions, humidity, sunlight, and others.

4.Provide information about the sunrise and sunset for a specific location

Allows the user to see the sunrise and sunset times for multiple bookmarked locations.ss

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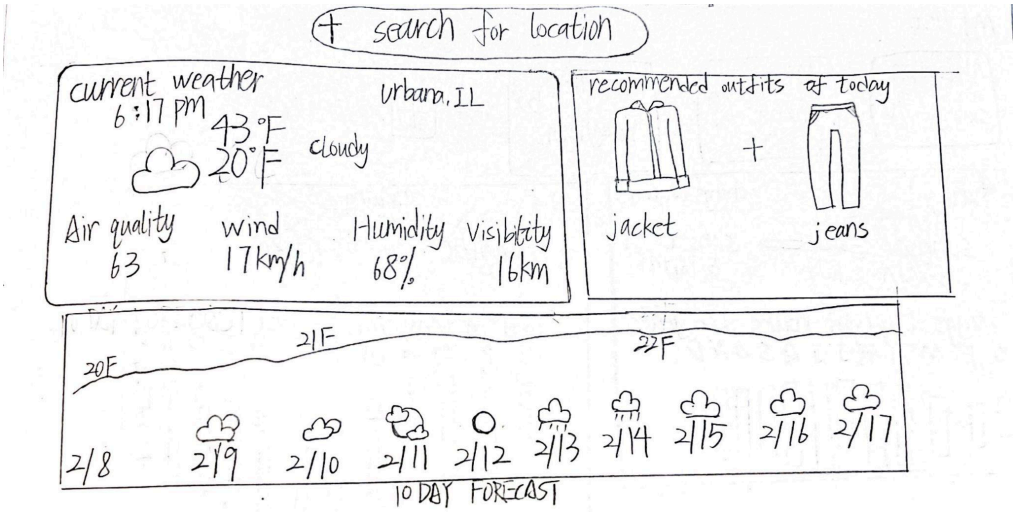
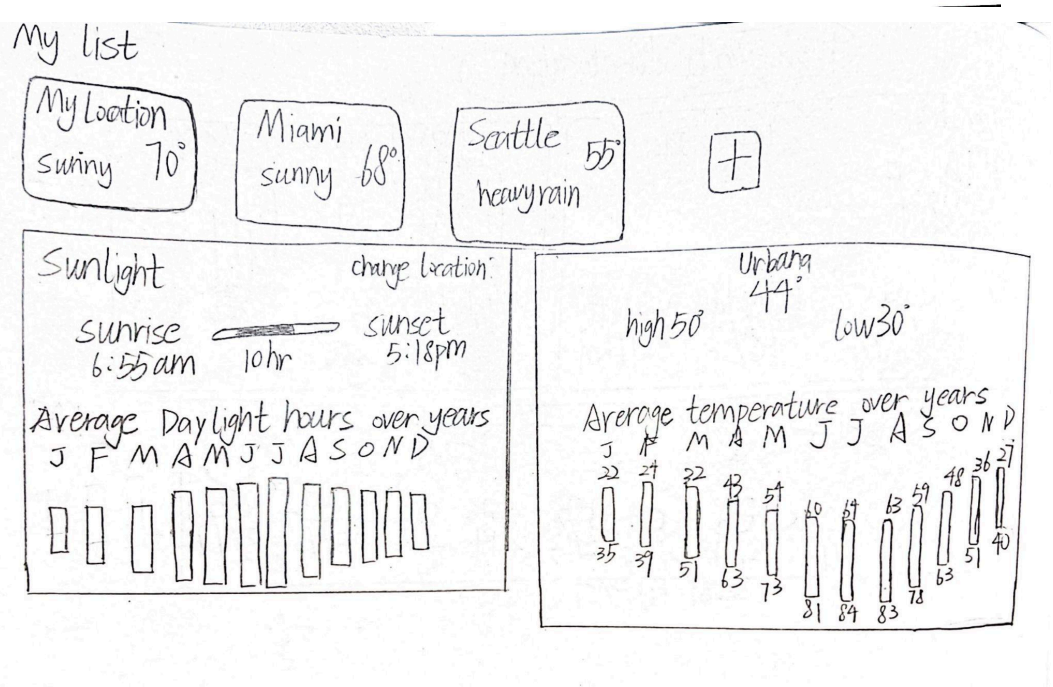
low-fidelity UI Mockup





Distribution

PART OF FUNCTIONALITY

Our group will work on backend and frontend collaboratively and each member will be responsible for the following part:

Hammad

Implement the front end of a web application using REACT and other front end resources. Create the connections between the frontend and backend.

Ibrahim

Assist in working with the databases that store user and weather information. Will help in connecting the database technologies with the backend to allow for accurate data translations.

Qiaochu

Implement the visualization of data through various tools , handle corresponding functions to return the visualization result, such as average temperature and daylight time, of chosen cities.

Venkataramanan

Implement data storage tools and techniques. Manage the databases that will store the user and weather information.