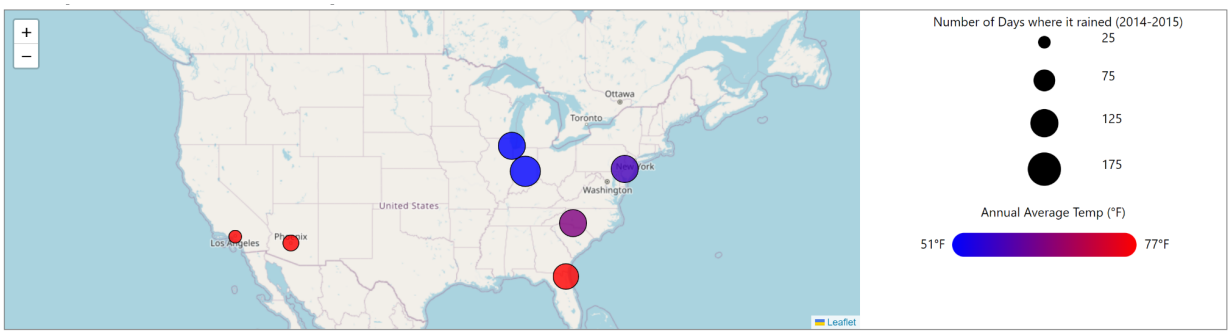
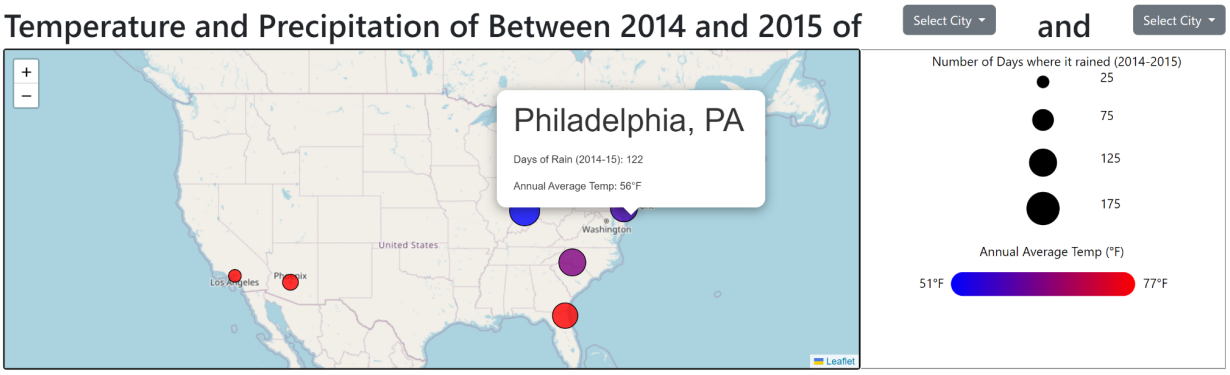
Project Overview

The task my design support is finding the daily average temperature and precipitation from July 1st, 2014 to June 30th, 2015, and most importantly, days where rain is present. This is so that farmers can find the time of year and location to start planting seeds.

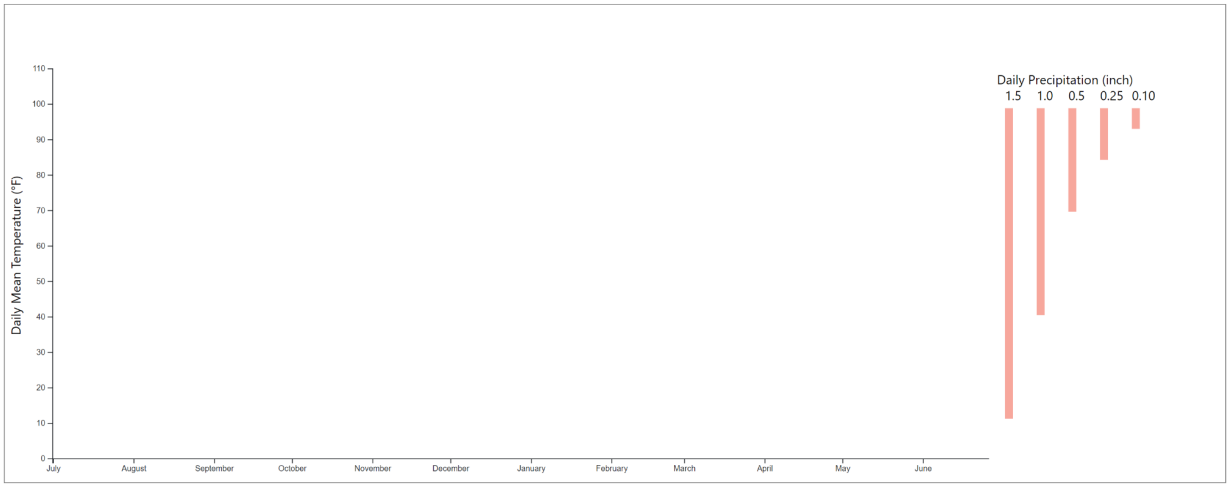
To achieve that goal, I made a proportional symbol map for overview. This is the first principle of Schneiderman's Mantra. Using Leaflet, I added a map that shows the US. Over the 7 cities, I put a circle that is proportional to the number of days where the actual precipitation is greater than 0. While area is not the most effective at representing quantitative data, it is one of the best alternatives to position, since it is occupied by geographical location. To encode the average yearly temperature, I represented it with color from blue to red. It makes sense for cooler temperature to be blue and hotter temperature to be red. The map is interactive, where the user can click on each marker and a popup window will appear showing the name and values. Just to make the overview even more clear, I added a legend section on the right.



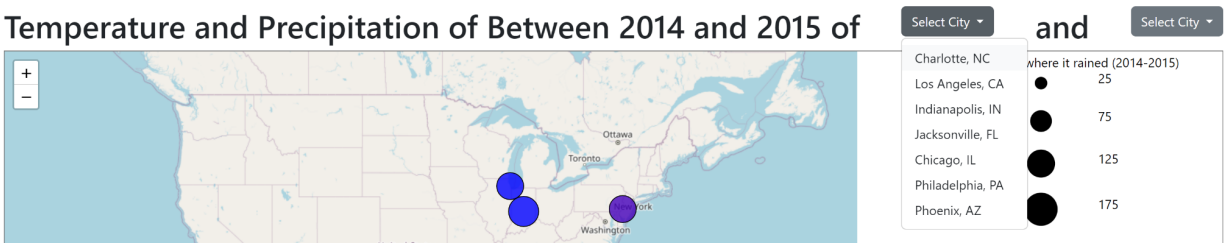


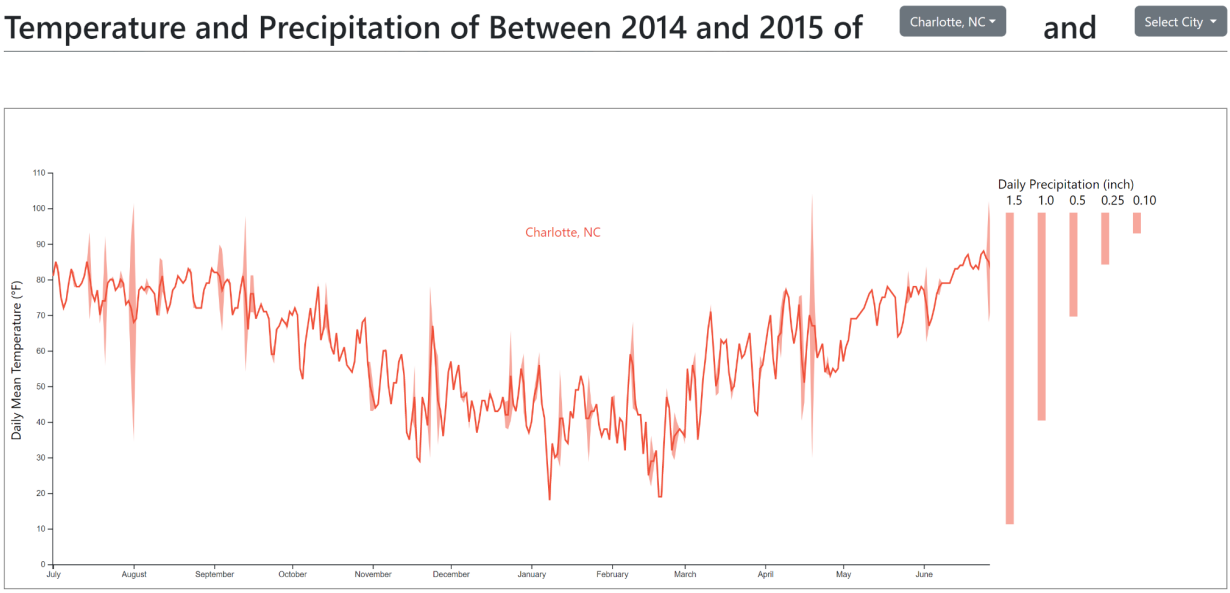
At the top of the page, there is a title that reads “Temperature and Precipitation of Between 2014 and 2015 of [select city] and [select city].” The [select city] are dropdown menus that contain all the

cities. Selecting a city will render the chart beneath the preview. When the page first loads, the chart looks like the image below.



The y-axis represents the daily mean temperature of a city in Fahrenheit. The x-axis represents one-year timeline. Upon selecting a city, the temperature will be displayed in the form of a line chart.





The area around the line represents the precipitation of the day. The greater the area, the heavier the rain. The chart is capable of displaying 2 cities at maximum. The two cities will be represented by different colors. The city name would also be shown in corresponding colors, and a legend is shown on the right side. Users can compare between two cities and find the days where there is rain and days that are suitable for planting crops.