

INFO 474

Final Deliverable

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Project Overview

This visualization allows users to compare temperature patterns (measured average temperature) over time for multiple cities, giving a variety of information for a range of use cases.

User Tasks:

- Identifying patterns and relationships by comparing temperature trends for different cities across time.
 - User Story: As a climate researcher, I'd like to compare the temperature trends of different cities over the last century in order to uncover any patterns or links between them and better understand how climate change affects different locations.
- Determining the cities with the most dramatic temperature swings.
 - User Story: As a traveler, I'd like to learn about the weather trends, especially temperature extreme swings in specific months of the year I'll be visiting so that I may pack appropriately and prepare for the weather.
- Examining how temperature trends in individual cities have changed over time
 - User Story: As a city planner, I want to look at how temperature trends in my city have evolved over the last few decades so that I may better prepare for future weather patterns and adjust my plans accordingly.
- Finding the cities that are the hottest and coolest during a certain time period
 - User Story: As a student studying weather patterns, I want to find the hottest and coolest cities in the United States during the summer months so that I may compare and analyze the data to better understand temperature patterns.

Design Overview:

The tool's design prioritizes delivering an intuitive and simple interface that allows users to rapidly explore temperature data. The cities included in the tool are Seattle, New York City, Houston, Charlotte, Los Angeles, Indianapolis, Jacksonville, Chicago, Philadelphia, and Phoenix. The visualization is a stacked line chart that shows the temperature for multiple cities users selected over time. The cities are color-coded for easy identification, and users can choose which cities to compare.

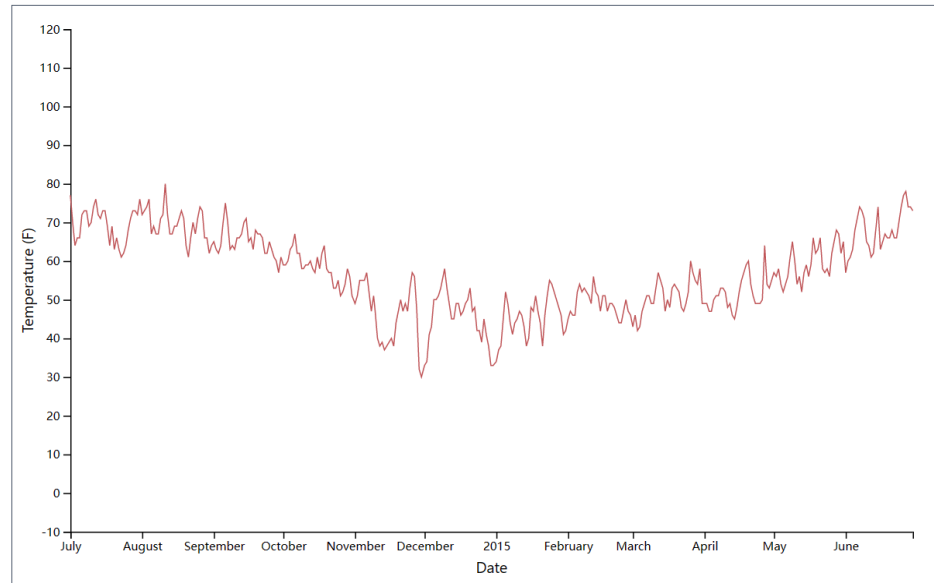
The goal of this visualization is to give users an easy-to-use and instructive representation of historical temperature data for various major cities in the United States. The visualization can assist users in gaining insights into temperature patterns and fluctuations over time by allowing them to analyze temperature trends across several cities

User Interface:

The measured average temperature of **Seattle, WA**, Jun 2014 to Jun 2015

Choose which cities to show in the visualization

- ☒ Seattle WA
- ☐ New York City NY
- ☐ Houston TX
- ☐ Charlotte NC
- ☐ Los Angeles CA
- ☐ Indianapolis IN
- ☐ Jacksonville FL
- ☐ Chicago IL
- ☐ Philadelphia PA
- ☐ Phoenix AZ

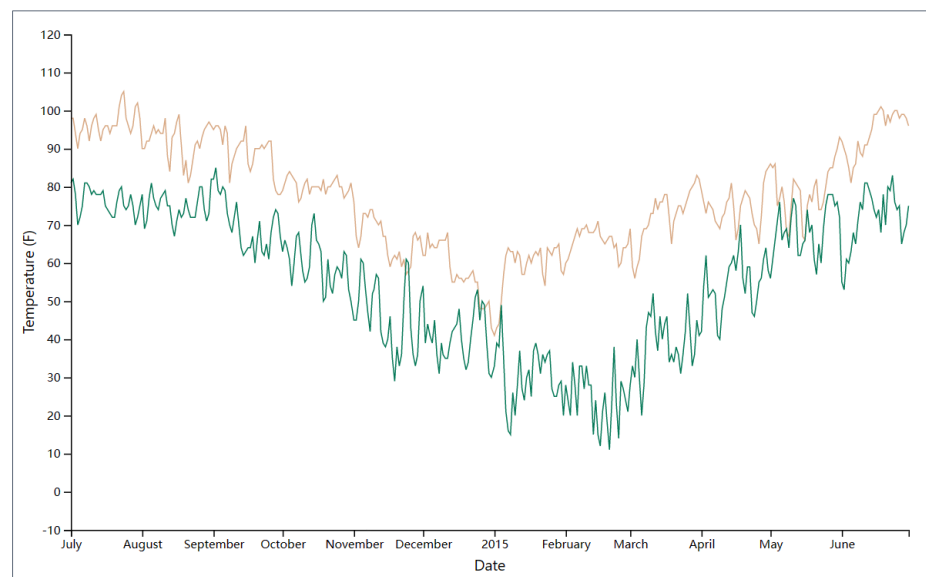


(Only one city was chosen)

The measured average temperature of **Phoenix, AZ**, **New York City, NY**, Jun 2014 to Jun 2015

Choose which cities to show in the visualization

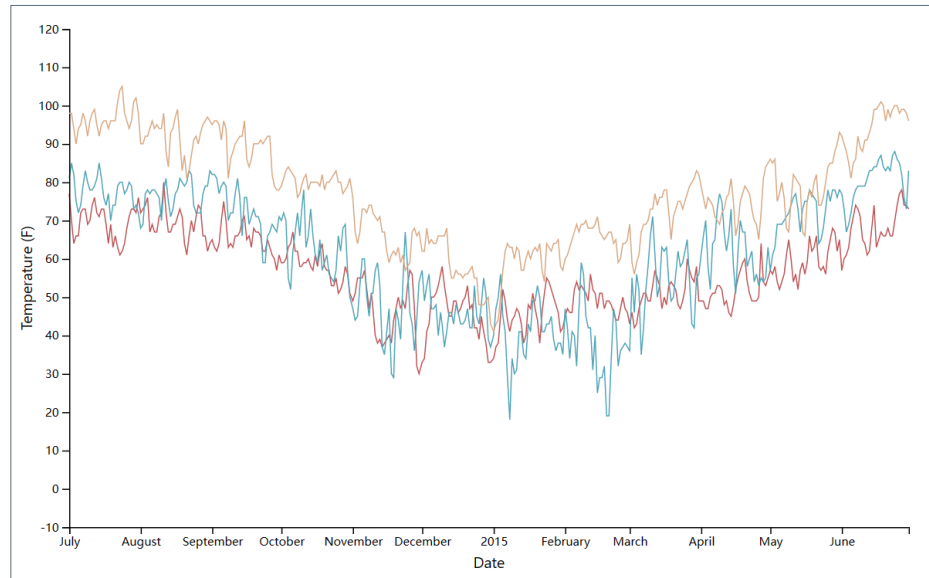
- ☐ Seattle WA
- ☒ New York City NY
- ☐ Houston TX
- ☐ Charlotte NC
- ☐ Los Angeles CA
- ☐ Indianapolis IN
- ☐ Jacksonville FL
- ☐ Chicago IL
- ☐ Philadelphia PA
- ☒ Phoenix AZ



The measured average temperature of **Seattle, WA**, **Charlotte, NC**, **Phoenix, AZ**, Jun 2014 to Jun 2015

Choose which cities to show in the visualization

- ☒ Seattle WA
- ☐ New York City NY
- ☐ Houston TX
- ☒ Charlotte NC
- ☐ Los Angeles CA
- ☐ Indianapolis IN
- ☐ Jacksonville FL
- ☐ Chicago IL
- ☐ Philadelphia PA
- ☒ Phoenix AZ



(Multiple cities selected)

Design Concept:

The inclusion of a sidebar, instead of a conventional checkbox allows users to select cities intuitively. The sidebar is visually appealing, with hover animations and showing a shade of selected items to let users know which ones they have chosen, boosting their overall user experience. By providing a cleaner and more structured style, which reduces visual clutter and makes it easier for users to identify cities of interest.

Furthermore, the unifying of colors provides a more straightforward and user-friendly experience. Without the need for a traditional legend of cities, users may immediately and simply recognize which line relates to which city. The color of the city is applied everywhere, including the name in the title, the circle in the sidebar, as well as the line of temperature, making it easier for the user to recognize and interpret the data.

By thinking outside the box and emphasizing innovative ideas rather than standard design patterns, the design is able to stand out and create a fresh and engaging user experience and at the same time complete various user tasks.