

## List of supported user tasks

1. View the overall weather trend of a city throughout the year
2. Filter by month to get more specific data/compare months in that city
3. Compare the overall yearly or monthly weather pattern of different cities
4. Hover over the viz to get precise values for any day of the year or month: average high and low values, plus record high and lows + their associated year.

## Design overview

In redesigning the standard weather chart, I aimed to make it easier to 1) compare the weather between cities and 2) get precise values. After experimenting with several different data encodings, I found that an area chart to capture the highs and lows, with separate lines to show the record temperatures, is a clear way to represent the shape of this data. I also found that this chart style lends itself well to animated transitions.

To compare cities, you select a city from the dropdown. The visualization gradually transitions into this city's data, making it easy to quickly understand how that city's weather compares to the previous. Months are another dropdown option, which can be used to compare between months of a single city, or how different cities experience the same month.

In terms of precision, there are two ways this design improves on the original. Hovering over the viz presents a tooltip with precise values for any day. And as mentioned before, being able to filter by a specific month makes it easier to get those precise values, and compare at a more narrow scale.

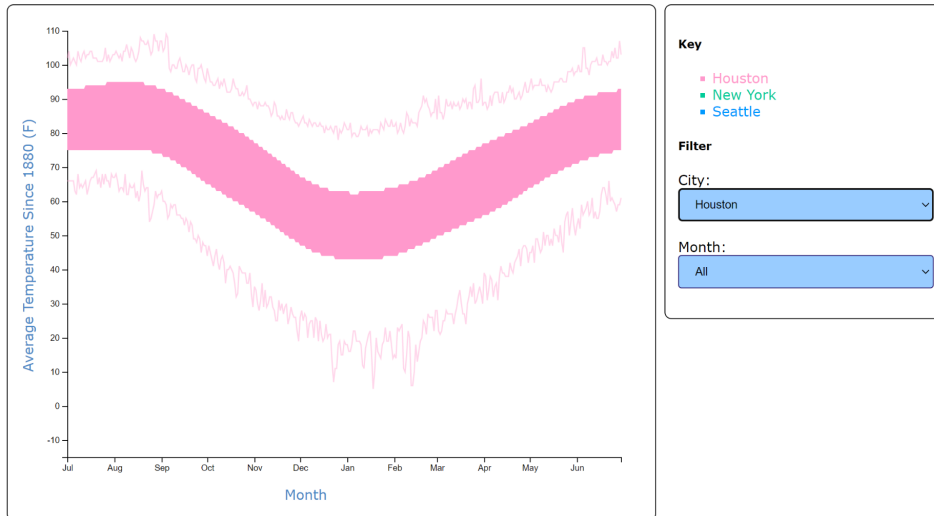
I also simplified the shape of the data by sticking with the average temperatures since 1880, so people can more quickly understand the key differences between city and month temperatures. Plus, I felt that this data is more generalizable, compared to the 2014-2015 values.

# Screenshots

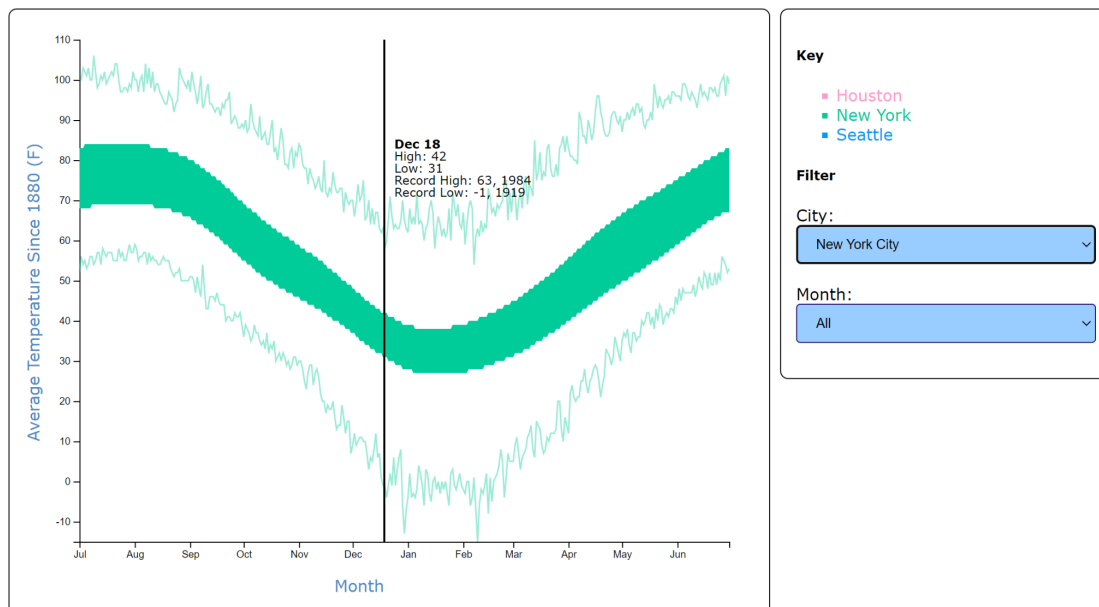
Default screen:

## Annual & Monthly Weather in U.S. Cities

See annual and monthly weather patterns for Houston, New York City and Seattle; and compare! Select a city and/or month from the dropdowns. Hover over data for precise values.



Tooltip:



Month view:

