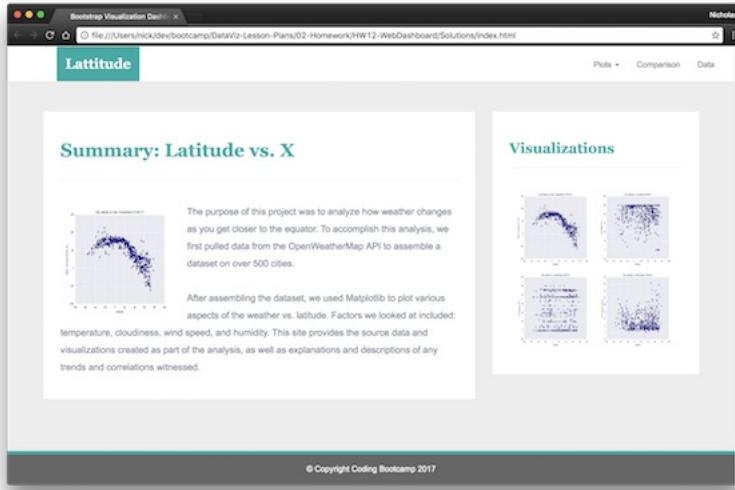


## Unit 12 | Assignment - Web Visualization Dashboard (Latitude)

### Background

Data is more powerful when we share it with others! Let's take what we've learned about HTML and CSS to create a dashboard showing off the analysis we've done.



### Latitude - Latitude Analysis Dashboard with Attitude

For this homework we'll be creating a visualization dashboard website using visualizations we've created in a past assignment. Specifically, we'll be plotting [weather data \(Resources/cities.csv\)](#).

In building this dashboard, we'll create individual pages for each plot and a means by which we can navigate between them. These pages will contain the visualizations and their corresponding explanations. We'll also have a landing page, a page where we can see a comparison of all of the plots, and another page where we can view the data used to build them.

#### Website Requirements

For reference, see the "[Screenshots](#)" section below.

The website must consist of 7 pages total, including:

- A [landing page](#) containing:
  - An explanation of the project.
  - Links to each visualizations page.
- Four [visualization pages](#), each with:
  - A descriptive title and heading tag.
  - The plot/visualization itself for the selected comparison.
  - A paragraph describing the plot and its significance.
- A ["Comparisons" page](#) that:
  - Contains all of the visualizations on the same page so we can easily visually compare them.
  - Uses a bootstrap grid for the visualizations.
    - The grid must be two visualizations across on screens medium and larger, and 1 across on extra-small and small screens.
- A ["Data" page](#) that:
  - Displays a responsive table containing the data used in the visualizations.
    - The table must be a bootstrap table component.
    - The data must come from exporting the .csv file as HTML, or converting it to HTML. You may use a csv-to-html table conversion tool, e.g. [ConvertCSV](http://www.convertcsv.com/csv-to-html.html) (<http://www.convertcsv.com/csv-to-html.html>).

The website must, at the top of every page, have a navigation menu that:

- Has the name of the site on the left of the nav which allows users to return to the landing page from any page.
- Contains a dropdown on the right of the navbar named "Plots" which provides links to each individual visualization page.
- Provides two more links on the right: "Comparisons" which links to the comparisons page, and "Data" which links to the data page.
- Is responsive (using media queries). The nav must have similar behavior as the screenshots ["Navigation Menu" section](#) (notice the background color change).

Finally, the website must be deployed to GitHub pages.

When finished, submit to BootcampSpot the links to 1) the deployed app and 2) the GitHub repository.

#### Considerations

- You may use the [weather data \(Resources/cities.csv\)](#) or choose another dataset. Alternatively, you may use the included [cities dataset \(Resources/cities.csv\)](#) and pull the images from the [assets folder \(Resources/assets\)](#).
- You must use bootstrap. This includes using the bootstrap `navbar` component for the header on every page, the bootstrap table component for the data page, and the bootstrap grid for responsiveness on the comparison page.
- You must deploy your website to GitHub pages, with the website working on a live, publicly accessible URL as a result.
- Be sure to use a CSS media query for the navigation menu.
- Be sure your website works at all window widths/sizes.
- Feel free to take some liberty in the visual aspects, but keep the core functionality the same.

#### Bonuses

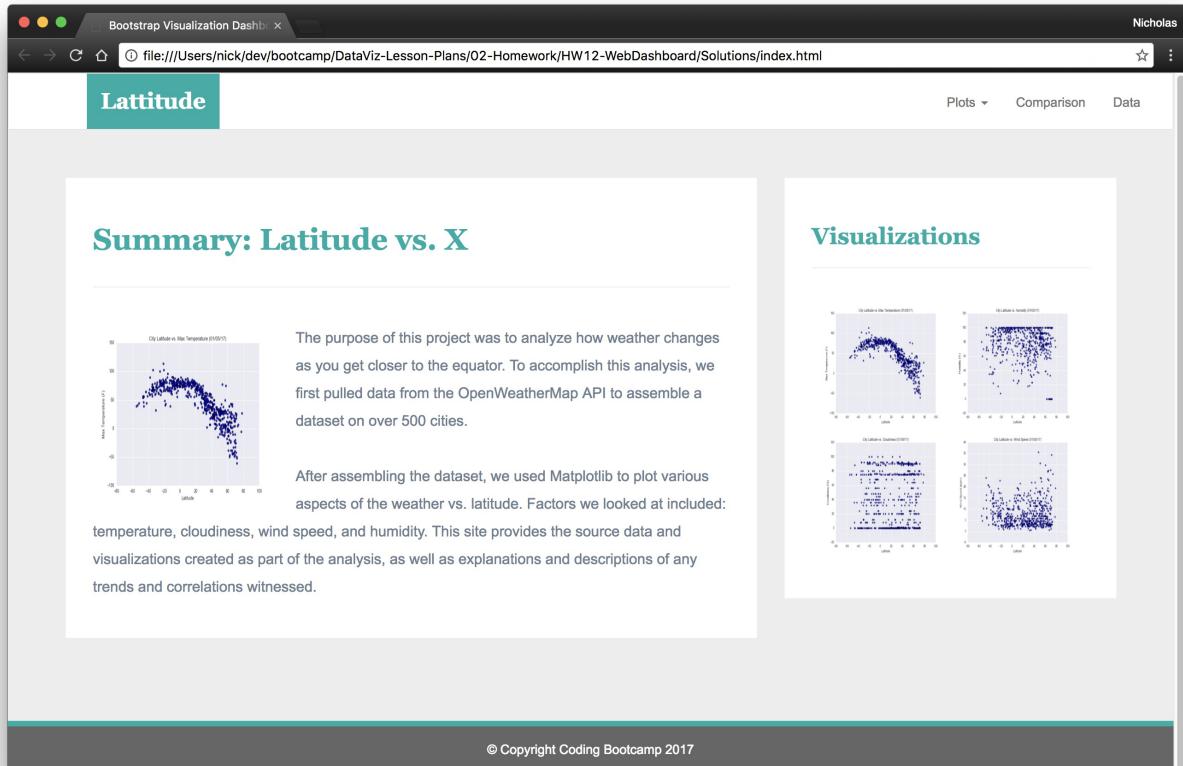
- Use a different dataset! The requirements above still hold, but make it your own.
- Use a bootstrap theme to customize your website. You may use a tool like [Bootswatch](https://bootswatch.com/) (<https://bootswatch.com/>). Make it look snazzy, give it some attitude. If using this, be sure you also meet all of the requirements listed above.
- Add extra visualizations! The more comparisons the better, right?
- Use meaningfulglyphicon next to links in the header.
- Have visualization navigation on every visualizations page with an active state. See the screenshots below.

## Screenshots

This section contains screenshots of each page that must be built, at varying screen widths. These are a guide; you can meet the requirements without having the pages look exactly like the below images.

### Landing page

Large screen:



Small screen:

Bootstrap Visualization Dashboard

Nicholas

Latitude

Plots ▾ Comparison Data

## Summary: Latitude vs. X

The purpose of this project was to analyze how weather changes as you get closer to the equator. To accomplish this analysis, we first pulled data from the OpenWeatherMap API to assemble a dataset on over 500 cities.

After assembling the dataset, we used Matplotlib to plot various aspects of the weather vs. latitude. Factors we looked at included: temperature, cloudiness, wind speed, and humidity. This site provides the source data and visualizations created as part of the analysis, as well as explanations and descriptions of any trends and correlations witnessed.

## Visualizations

City Latitude vs. Max Temperature (01/05/17)

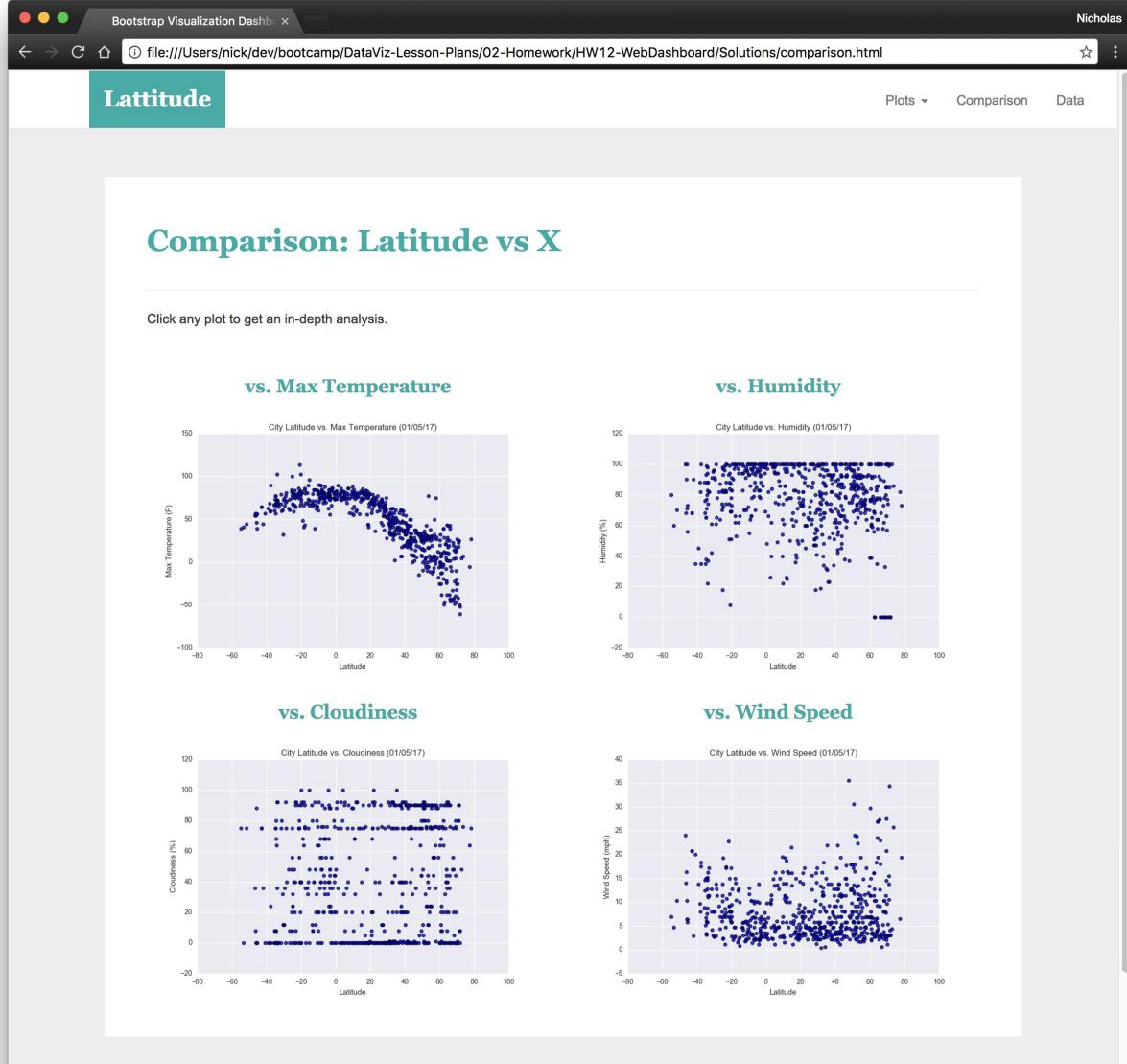
City Latitude vs. Max Temperature (01/05/17)

City Latitude vs. Humidity (01/05/17)

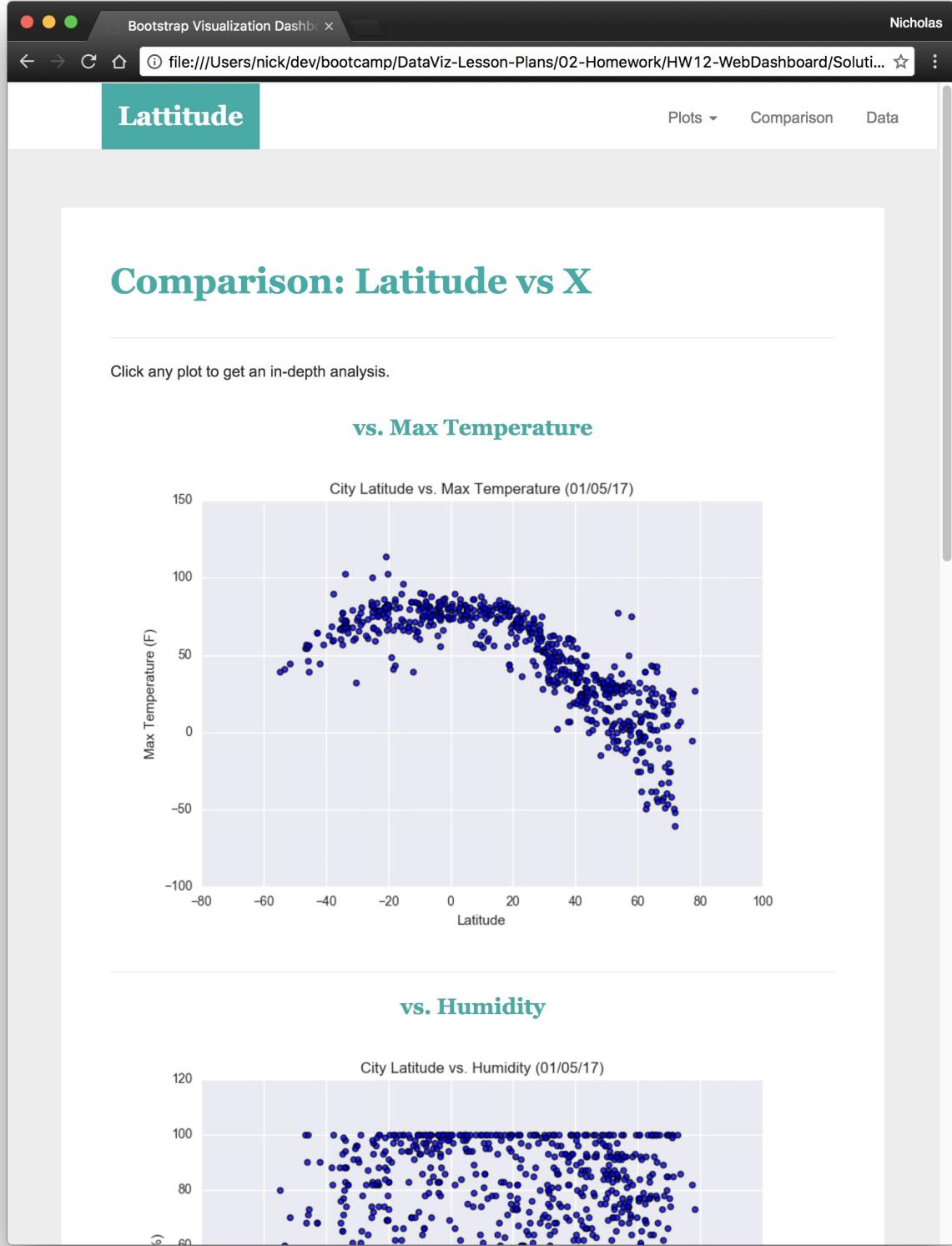
City Latitude vs. Cloudiness (01/05/17)

City Latitude vs. Wind Speed (01/05/17)

Large screen:



Small screen:



[Data page](#)

Large screen:

The screenshot shows a web browser window titled "Bootstrap Visualization Dashboard" with the URL "file:///Users/nick/dev/bootcamp/DataViz-Lesson-Plans/02-Homework/HW12-WebDashboard/Solutions/data.html". The dashboard has a header with tabs for "Plots", "Comparison", and "Data". The main content area is titled "Latitude" and contains a section titled "Data". Below this, a caption states: "The following table includes all of the data used for plotting during this project." A table follows, listing 18 cities with their corresponding data. The columns are: City\_ID, City, Cloudiness, Country, Date, Humidity, Lat, Lng, Max Temp, and Wind Speed.

City_ID	City	Cloudiness	Country	Date	Humidity	Lat	Lng	Max Temp	Wind Speed
0	longyearbyen	75	SJ	1483588200	73	78.22	15.64	26.6	19.46
1	asau	0	RO	1483592400	59	46.43	26.4	37.4	14.99
2	hartselle	1	US	1483592280	86	34.44	-86.94	32.0	3.36
3	komsomolskiy	40	UZ	1483592400	80	40.43	71.72	37.4	3.36
4	kapaa	90	US	1483592160	88	22.08	-159.32	71.6	17.22
5	cape town	36	ZA	1483593935	94	-33.93	18.42	70.15	15.14
6	damme	0	DE	1483591800	74	52.52	8.2	30.2	4.7
7	taolanaro	75	MG	1483592400	83	-25.03	47.0	75.2	13.87
8	georgetown	75	GY	1483588800	94	6.8	-58.16	75.2	4.7
9	rikitea	0	PF	1483594241	100	-23.12	-134.97	75.59	7.76
10	karaul	0	IN	1483594287	85	26.5	77.02	70.15	4.18
11	punta arenas	0	CL	1483588800	60	-53.15	-70.92	41.0	4.7
12	kendari	24	ID	1483593999	79	-3.94	122.5	84.14	6.53
13	aykhal	0	RU	1483594270	0	66.0	111.5	-43.08	2.84
14	meyungs	90	PW	1483591800	89	7.34	134.47	86.0	12.75
15	ushuaia	75	AR	1483592400	80	-54.8	-68.3	39.2	6.93
16	biak	0	ID	1483594554	86	-1.88	136.23	86.48	2.73
17	bolungarvik	76	IS	1483593814	100	66.08	-23.12	39.19	18.05
18	temple	1	US	1483593300	80	31.1	-97.34	35.6	3.85

Small screen:

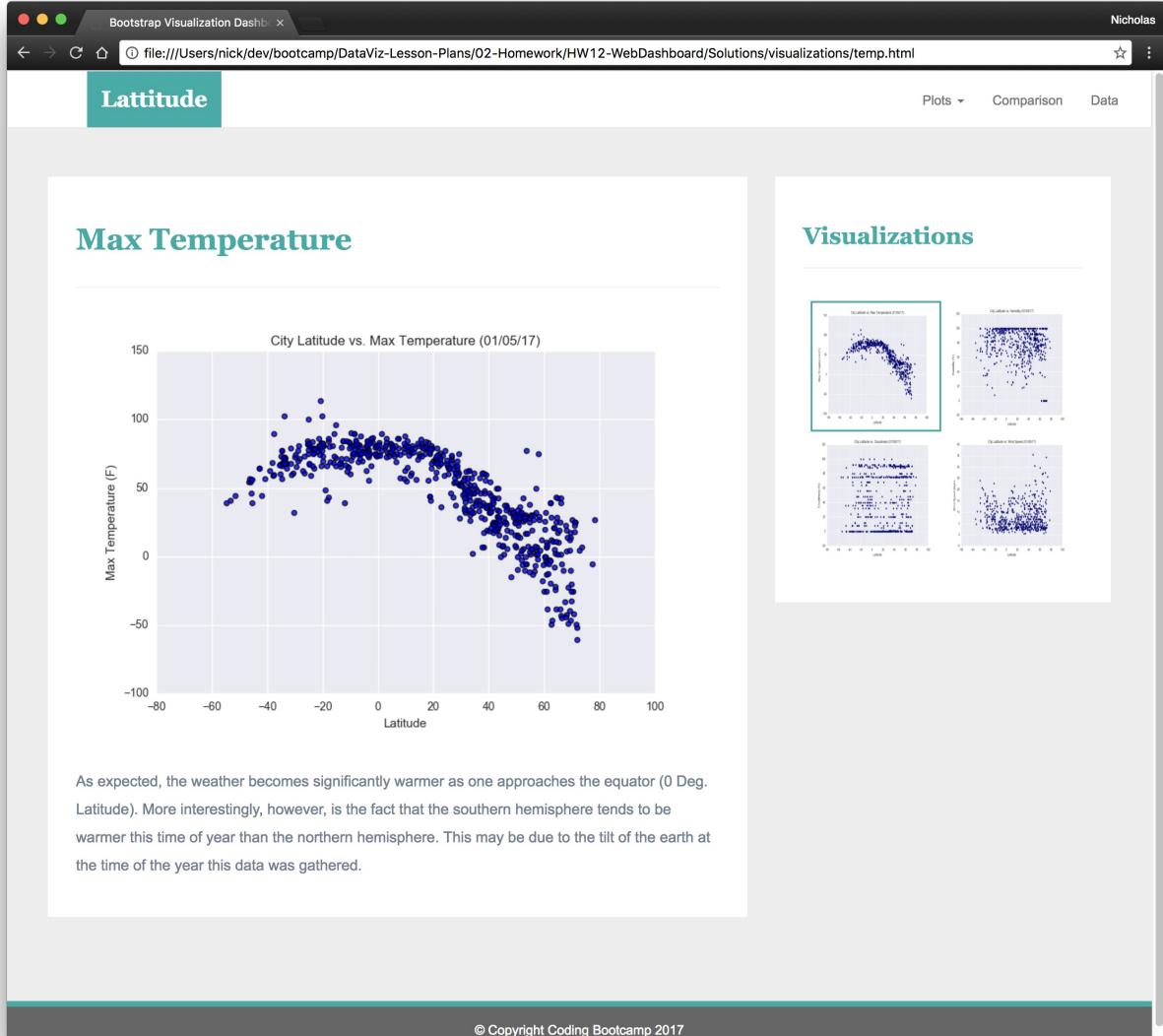
The screenshot shows a web browser window titled "Bootstrap Visualization Dashboard" with the URL "file:///Users/nick/dev/bootcamp/DataViz-Lesson-Plans/02-Homework/HW12-WebDash...". The dashboard has a teal header bar with the title "Latitude". Below the header, there are three tabs: "Plots", "Comparison", and "Data". The "Data" tab is active, displaying a table with 11 rows of data. The columns are labeled: City\_ID, City, Cloudiness, Country, Date, Humidity, Lat, Lng, Temp, and Precip. The data includes various cities like longyearbyen, asau, hartselle, komsomolskiy, kapaa, cape town, damme, taolanaro, georgetown, rikitea, and karaul, along with their respective coordinates and weather metrics.

City_ID	City	Cloudiness	Country	Date	Humidity	Lat	Lng	Temp	Precip
0	longyearbyen	75	SJ	1483588200	73	78.22	15.64	7	10
1	asau	0	RO	1483592400	59	46.43	26.4	7	10
2	hartselle	1	US	1483592280	86	34.44	-86.94	7	10
3	komsomolskiy	40	UZ	1483592400	80	40.43	71.72	7	10
4	kapaa	90	US	1483592160	88	22.08	-159.32	7	10
5	cape town	36	ZA	1483593935	94	-33.93	18.42	7	10
6	damme	0	DE	1483591800	74	52.52	8.2	7	10
7	taolanaro	75	MG	1483592400	83	-25.03	47.0	7	10
8	georgetown	75	GY	1483588800	94	6.8	-58.16	7	10
9	rikitea	0	PF	1483594241	100	-23.12	-134.97	7	10
10	karaul	0	IN	1483594287	85	26.5	77.02	7	10

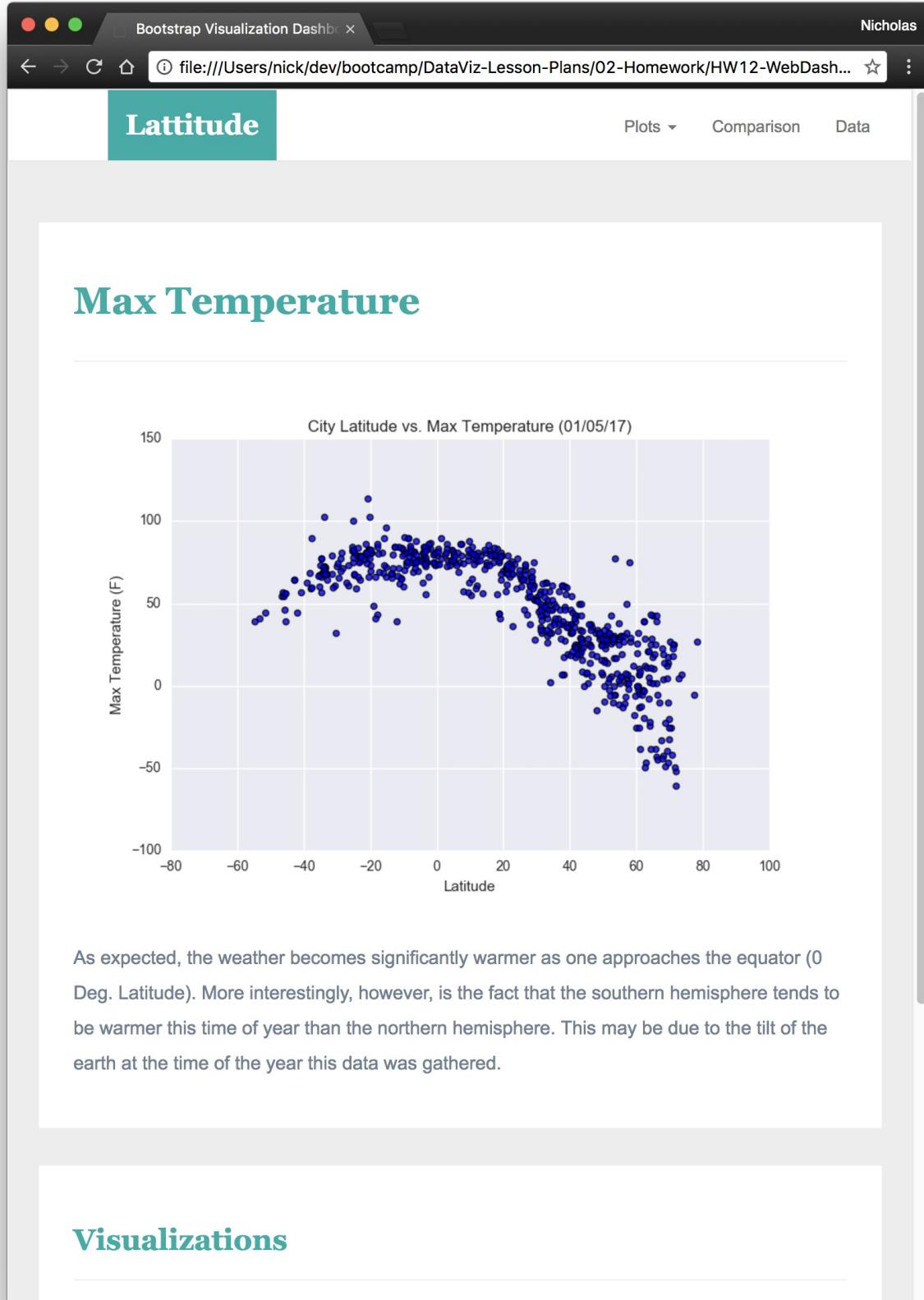
#### Visualization pages

You'll build four of these, one for each visualization. Here's an example of one:

Large screen:



Small screen:



Large screen:

The dashboard has a teal header bar with the word "Latitude". On the right side, there is a vertical navigation menu with options: "Plots ▾", "Comparison", and "Data". A dropdown menu is open under "Plots ▾" showing "Max Temperature", "Humidity", "Cloudiness", and "Wind Speed". Below this, the word "visualizations" is written in teal. The main content area features a large teal title "Max Temperature" and a small icon of three horizontal lines.

Small screen:

The dashboard has a teal header bar with the word "Latitude". On the right side, there is a vertical navigation menu with options: "Plots ▾", "Comparison", and "Data". A dropdown menu is open under "Plots ▾" showing "Max Temperature", "Humidity", "Cloudiness", and "Wind Speed". The main content area features a large teal title "Max Temperature" and a small icon of three horizontal lines.

# Max Temperature