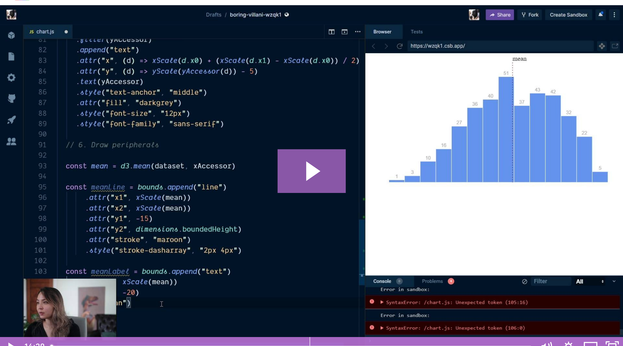

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Ask a question

Draw peripherals

We draw a line depicting the mean of our distribution, as well as our axes.

LESSON · DISCUSSION 2

Contents
Draw peripherals
Draw axes
Set up interactions
Looking at our chart
Final code for this lesson

When looking at the shape of a distribution, it can be helpful to know where the mean is.

The mean is just the average — the center of a set of numbers. To calculate the mean, you would divide the sum by the number of values. For example, the mean of `[1, 2, 3, 4, 5]` would be `(1 + 2 + 3 + 4 + 5) / 5 = 3`.

Instead of calculating the mean by hand, we can use `d3.mean()` to grab that value. Like many d3 methods we've used, we pass the dataset as the first parameter and an optional accessor function as the second.

Great! Let's see how comfortable we are with drawing an unfamiliar SVG element: `<line>`. A `<line>` element will draw a line between two points: `[x1, y1]` and `[x2, y2]`. Using this knowledge, let's add a line to our bounds that is:

- at the mean humidity level,
- starting 15px above our chart, and
- ending at our x axis.

How close can you get before looking at the following code?

Let's add some styles to the line so we can see it (by default, `<line>`s have no stroke color) and to distinguish it from an axis. SVG element strokes can be split into dashes with the `stroke-dasharray` attribute. The lines alternate between the stroke color and transparent, starting with transparent. We define the line lengths with a space-separated list of values (which will be repeated until the line is drawn).

Let's make our lines dashed with a 2px long maroon dash and a 4px long gap.

Give yourself a pat on the back for drawing your first `<line>` element!

Let's label our line to clarify to readers what it represents. We'll want to add a `<text>` element in the same position as our line, but 5 pixels higher to give a little gap.

Hmm, we can see the text but it isn't horizontally centered with our line.

Let's center our text by adding the CSS property `text-anchor: middle`. This is a property specifically for setting the horizontal alignment of text in SVG.

Perfect! Now our mean line is clear to our readers.

Draw axes

As usual, our last task here is to draw our axes. But we're in for a treat! Since we're labeling the y value of each of our bars, we won't need a y axis. We just need an x axis and we're set!

We'll start by making our axis generator — our axis will be along the bottom of the chart so we'll be using `d3.axisBottom()`.

Then we'll use our new axis generator to create an axis, then shift it below our bounds.

And lastly, let's throw a label on there to make it clear what the tick labels represent.

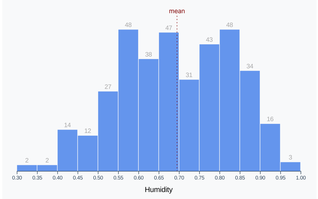
And voila, we're done drawing our peripherals!

Set up interactions

Next, we would set up any chart interactions. We don't have any interactions for this chart, but stay tuned — we'll cover this in the next chapter.

Looking at our chart

Chart finished! Let's take a look at our distribution.



Our histogram looks somewhere in-between a normal and bimodal distribution. Don't worry if those terms make no sense right now — we cover distribution shapes in detail in **Chapter 8** of the book.

Final code for this lesson