

ILLUSTRATOR BASICS:

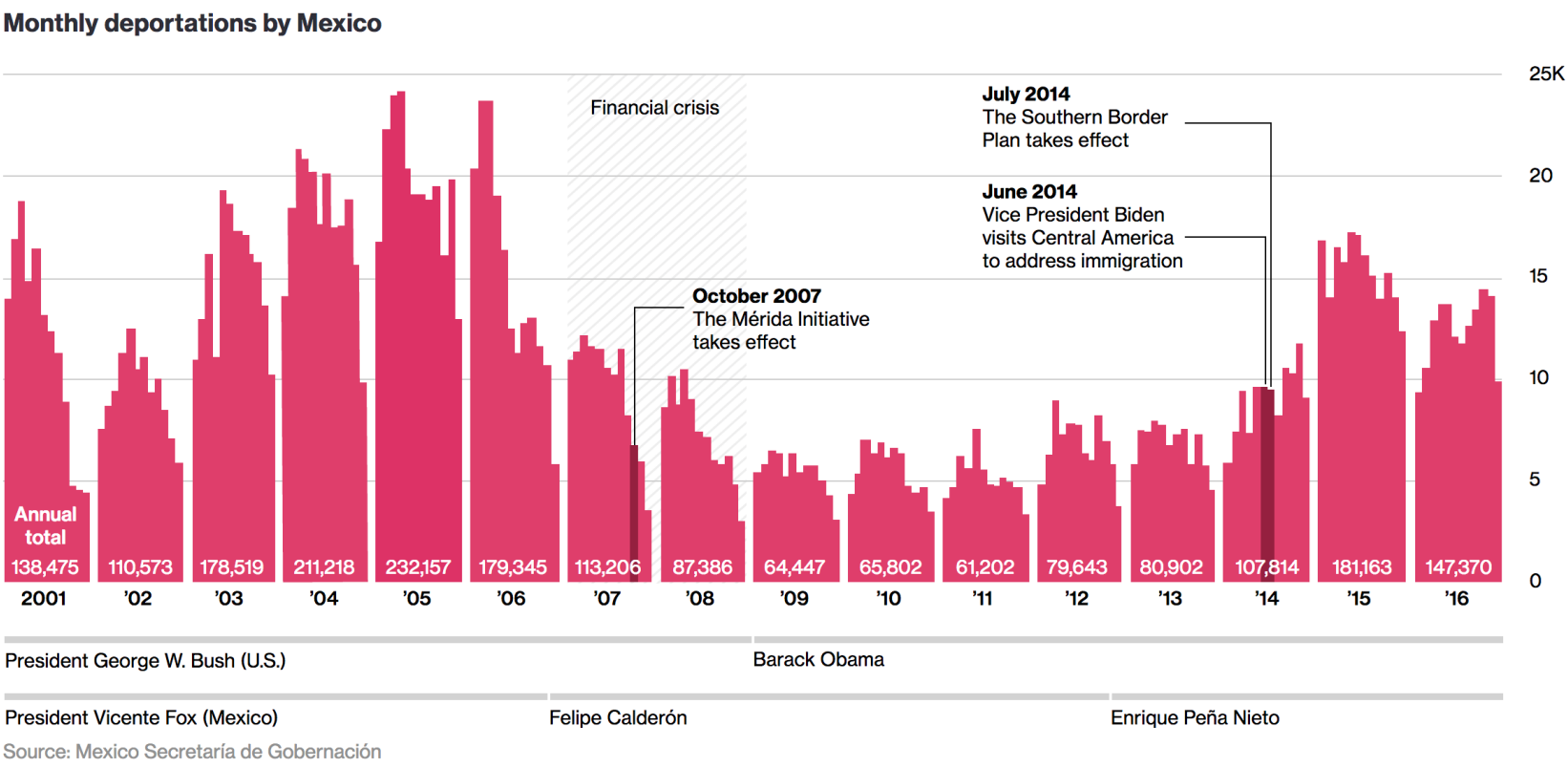
How to make some fancy time series bar charts

1 First thing first, let's see what we will be making today

As you can see, it's basically a bar chart consisted of a series of bar charts (year per chart) with some fancy annotations and two timelines (U.S. presidents and Mexico president)

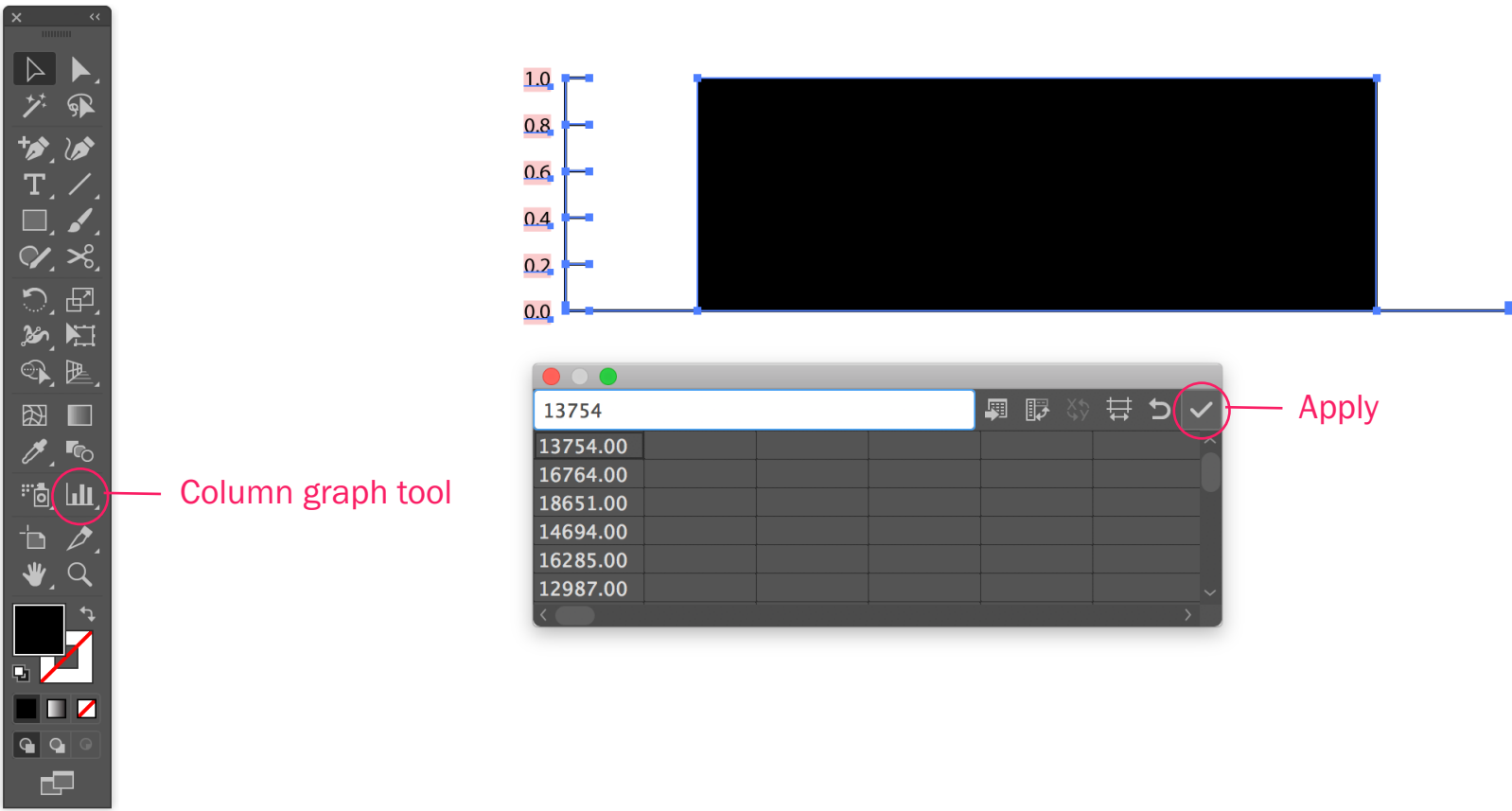
Why are we making monthly bars? Because we knew that undocumented immigration has a seasonal pattern. How did we know that? It's called prereporting my friend!

Link to story:
<https://www.bloomberg.com/graphics/2017-mexico-trump-first-line-of-defense-on-immigration/>



2 Grabbing your data, and use the column graph tool

Let's grab the 2001 12 months data and set your mini chart's width and height and then dump your data into the **column graph tool**, hit apply.

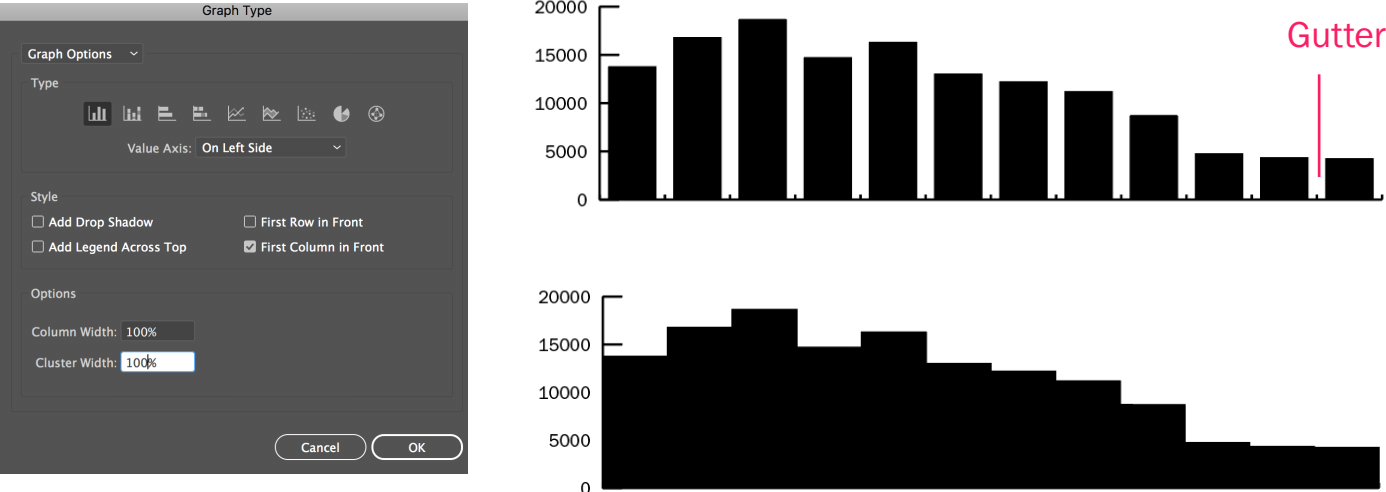


3 Now you have your 2001 bar chart! But it looks nothing like the chart we wanted to make! (wide gutters!)

Let's fix it!

Use the selection tool and right click your chart. Go to **type**. Change both **column width** and **cluster width** to **100%**!

Now you have a no gutter version! Phew!

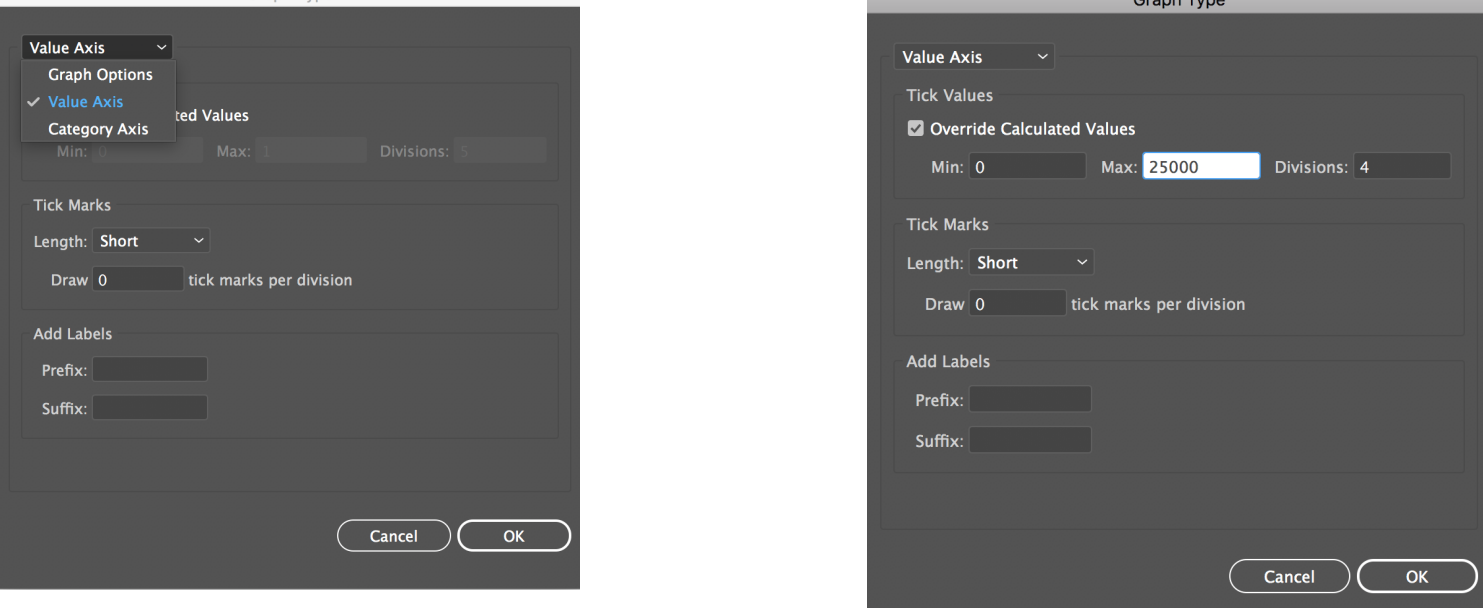


4 So now you have a bar chart for 2011. Now let's make a few more! (2001 to 2016)

But before we do anything, let's look at the result chart in section 1. You can see all mini charts share the same y scale, which means we can't just swap a chart with new data and expect the y axis lined up.

In this case, we need overwrite our 2011 chart's scale (min/max) with the min and max values from 2001 to 2016.

Right click your chart, go to type, and value axis. Overwrite it's min and max, in this case, we want zero base line so the min is 0, and the max is 24153 (sorting your spreadsheet), but that's just put in 25000 for max (buffer)



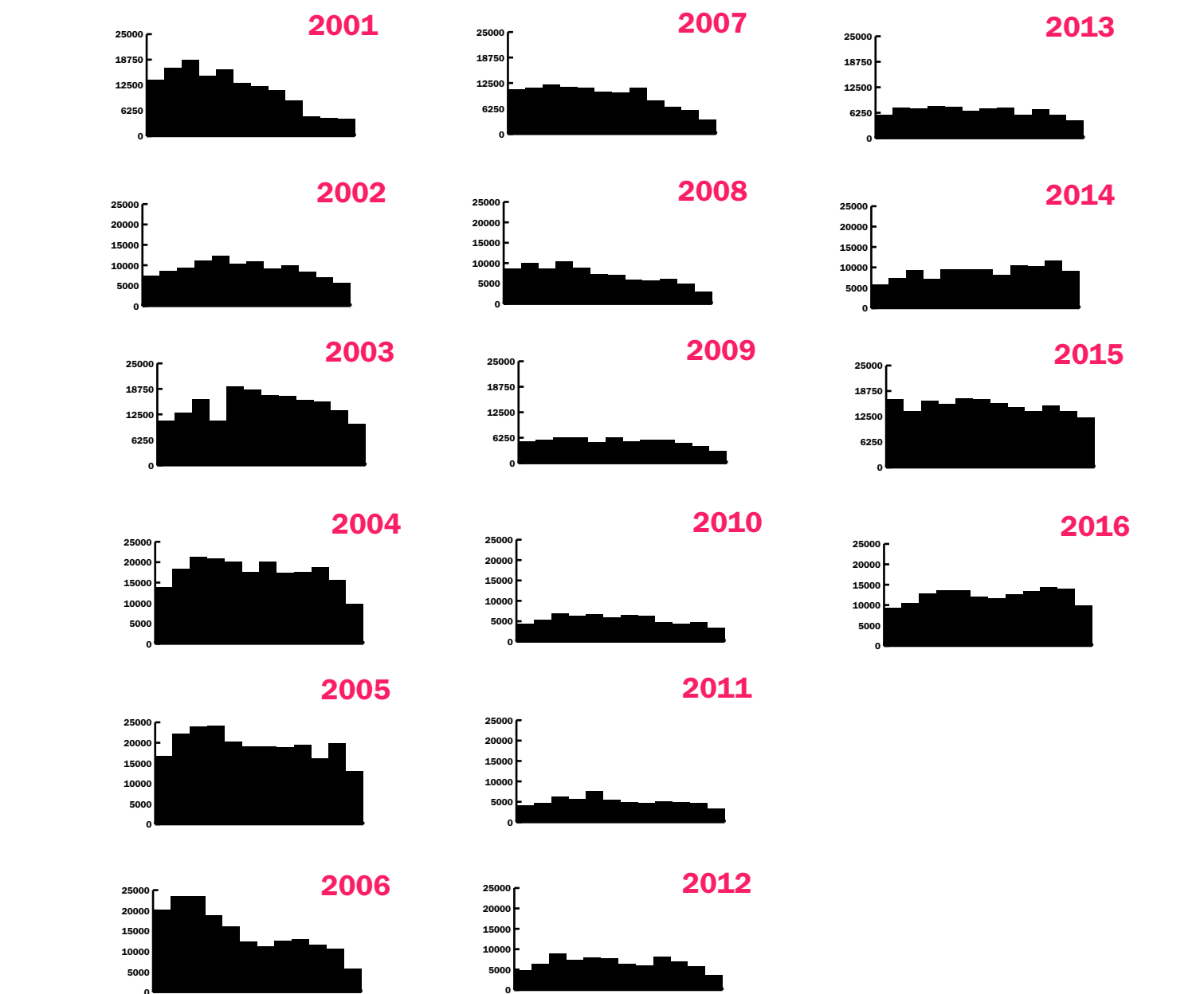
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5 Small multiples!

Now, use the selection tool to select your 2001 chart. And then **command C (copy)** and then hit **command F (place in place)**. Alternatively, you can hold the **option** key and drag your chart to copy and past.

Repeat this step a few time untill you have a collection of charts from 2001 to 2016. =>



6 Drag and drop to arrage charts to just one row.

Select individual chart, go to **object** and then **ungroup (or do shift + command + g)** each one of them!



7 Alignment and spacing

Now you have all your bar chart ungrouped, let's get rid of all the extra y axes and all x axes(but leave the 2001 y axis untouched)

Next, let's select all your charts, and click the item you want your charts to be aligned to (in this case it's your 2001 bar chart). Go to the align tool and click **verticle bottom align**.

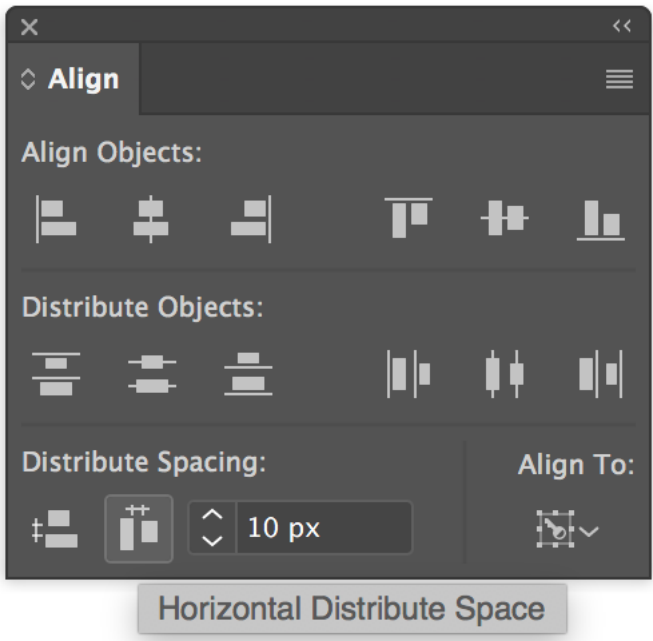
yay, now everything is bottom aligned but the spacing between each bar chart is off. Le't fix it!

Select all your charts, make 2001 bar chart your key object by clicking it. Now go to align tool again, and hit **horizontal distribute space**, give it a **numeric value!** BOOM! Now your mini charts have equal spacing!!!

Bottom aligned



Equal spacing

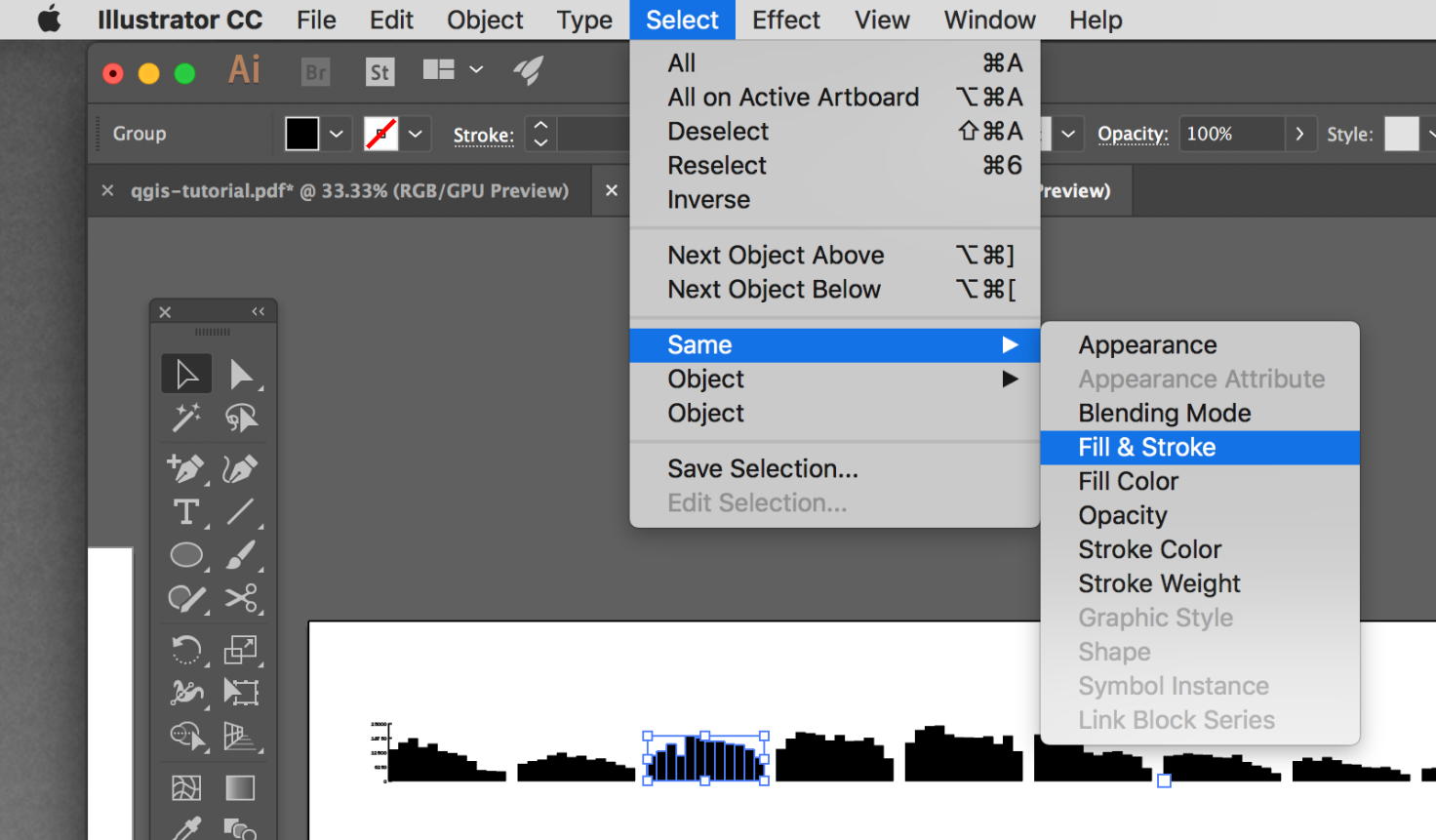


8 Now let's do some basic styling

Try to make your y axis look as close as our example as possible. And make it stroke color grey.

Once you are done with axis styling, lock your axis by selecting it and then **hit command + 2**.

You can select all mini charts bars by clicking one of your bar, hit select same -> fill and stroke.



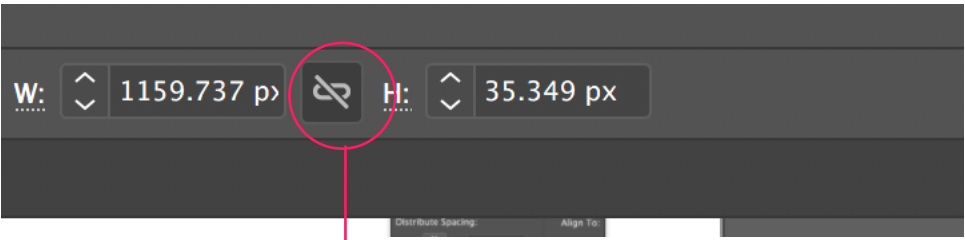
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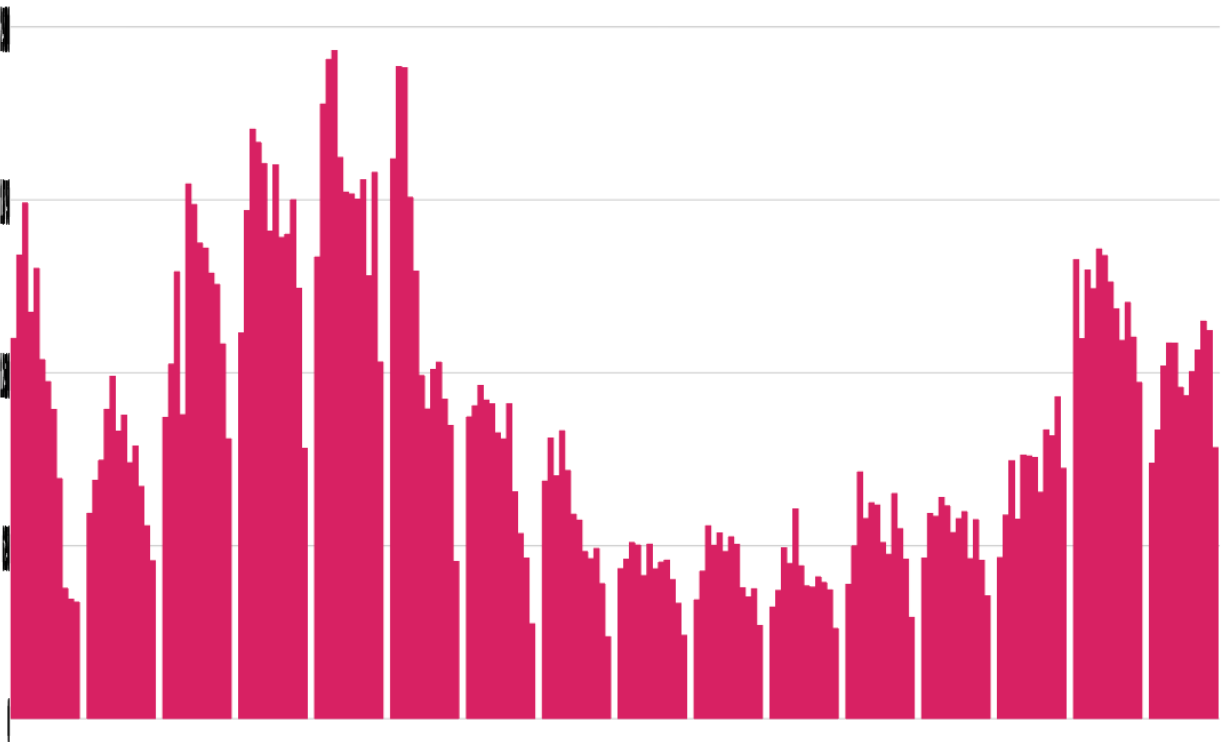
9 Aspect ratio

We can make the aspect ratio closer to the example by selection all chart elements, group them (**command + G**)

Now go to **transform**. Make sure **constrain width and height proportion isn't selected**. And now you can type in your desire width and height. I typed in width 800px, height 500px. Not too bad looking huh?



Deselect constrain width and height



10 Mobile version

The aspect ratio we have right now works for desktop but not mobile. We can make a mobile version by selecting your chart, right click and go to **transform => rotate => -90 degrees**.

As you can see, your chart now is flipped upside down! Yessss. Group everything again and change your width to 300px.

