Northwestern University

The Psychology of Data Visualization
Week 5

AGENDA

- Lecture exercise

- Assignment #4

- Final project

- Discussion

- Exercise
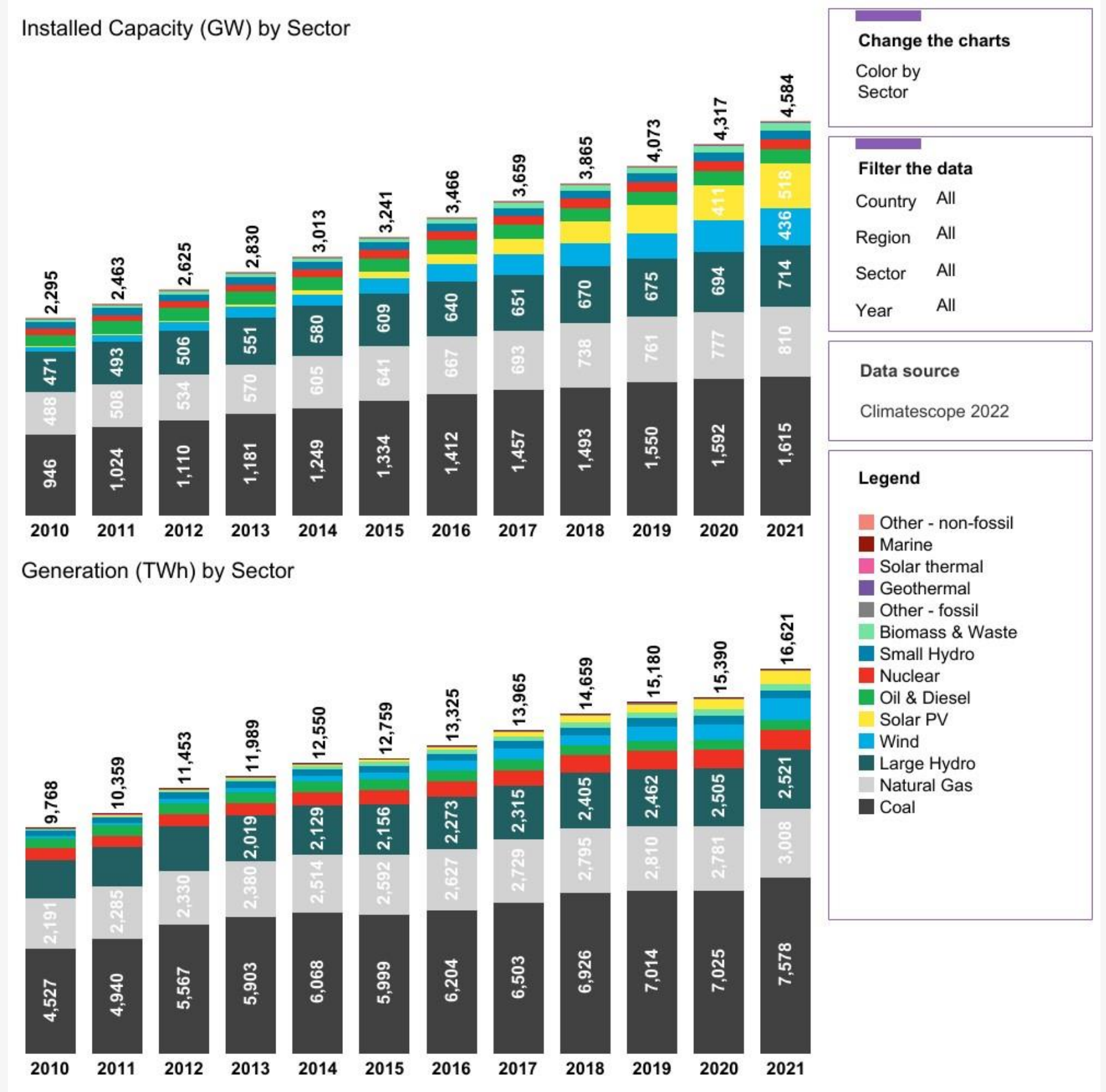
EXERCISE

Take a look at the graph on the next slide.

How could you apply preattentive attributes and chunking to improve it?

Do you think the graph is likely stored in your audience's long-term memory?

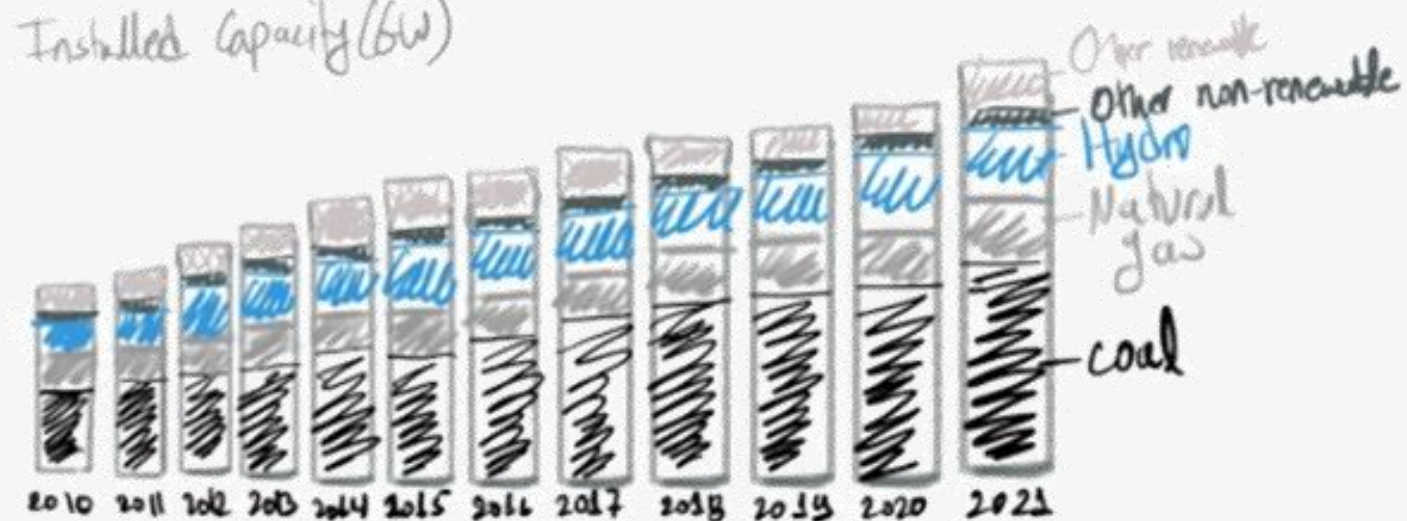Sketch your revised version of the graph and share your answers on Canvas.

Source: https://public.tableau.com/app/profile/bloomberg.new.energy.finance/viz/ClimatescopeCapacityGeneration/CapacityGeneration
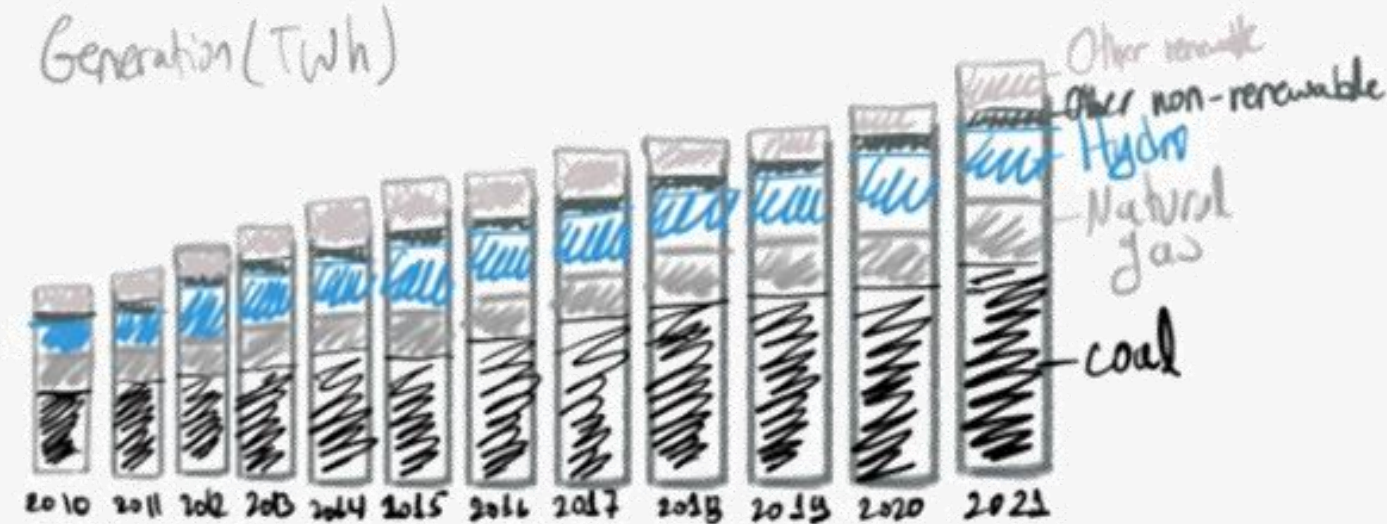
The emergence of Hydropower relative to other renewable and non-renewable resources.

Installed Capacity (GW)

Other renewable
Other non-renewable
Hydro
Natural gas
coal

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Generation (TWh)

Other renewable
Other non-renewable
Hydro
Natural gas
coal

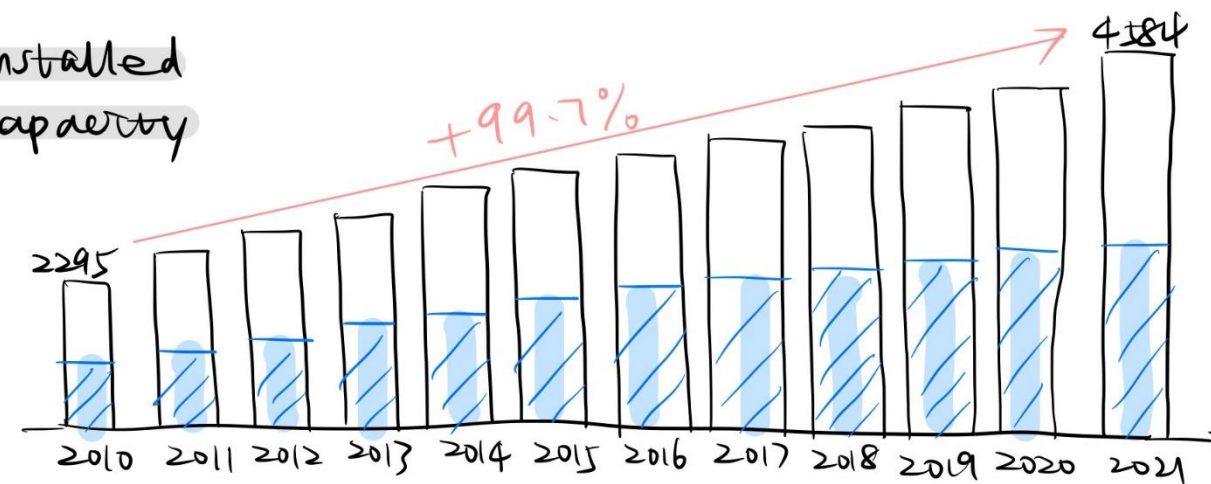2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
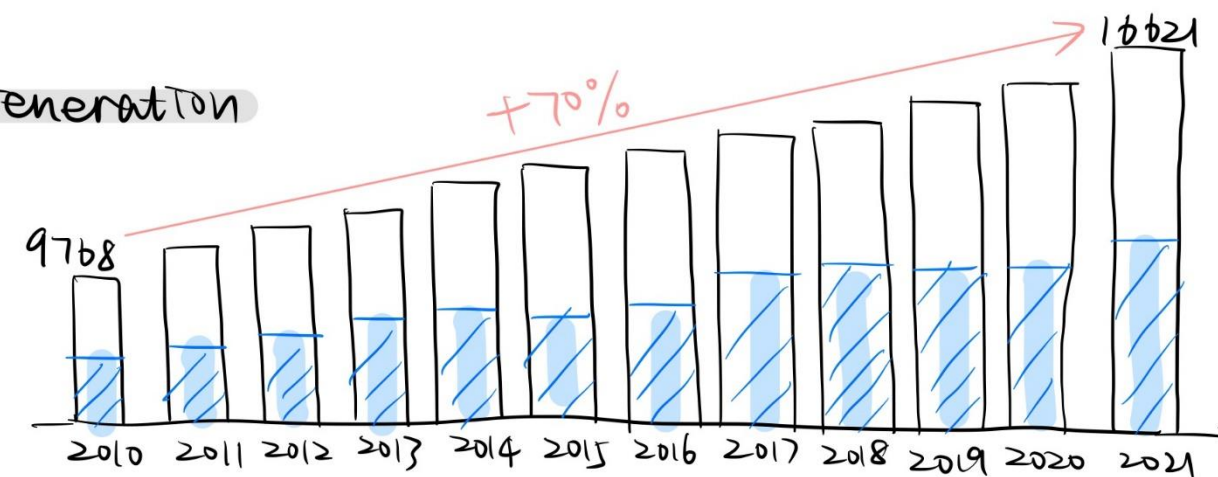
Data source: Climate Scope 2022

Coal Has the Most Installed Capacity (GW) and Generation (TWh)

14 major sectors over the last 12 years

Installed Capacity

+99.7%

4484

2295

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Generation

+70%

16621

9768

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

As time goes by, the needs for coal are still critical and so occupy a larger portion compared to other energy resources. The trend for all energy resources will continue to increase as well as the most biggest portion — coal.

installed Capacity

- other
- large hydro
- natural gas
- coal

+99.76%

2010 2012 2014 2016 2018 2020

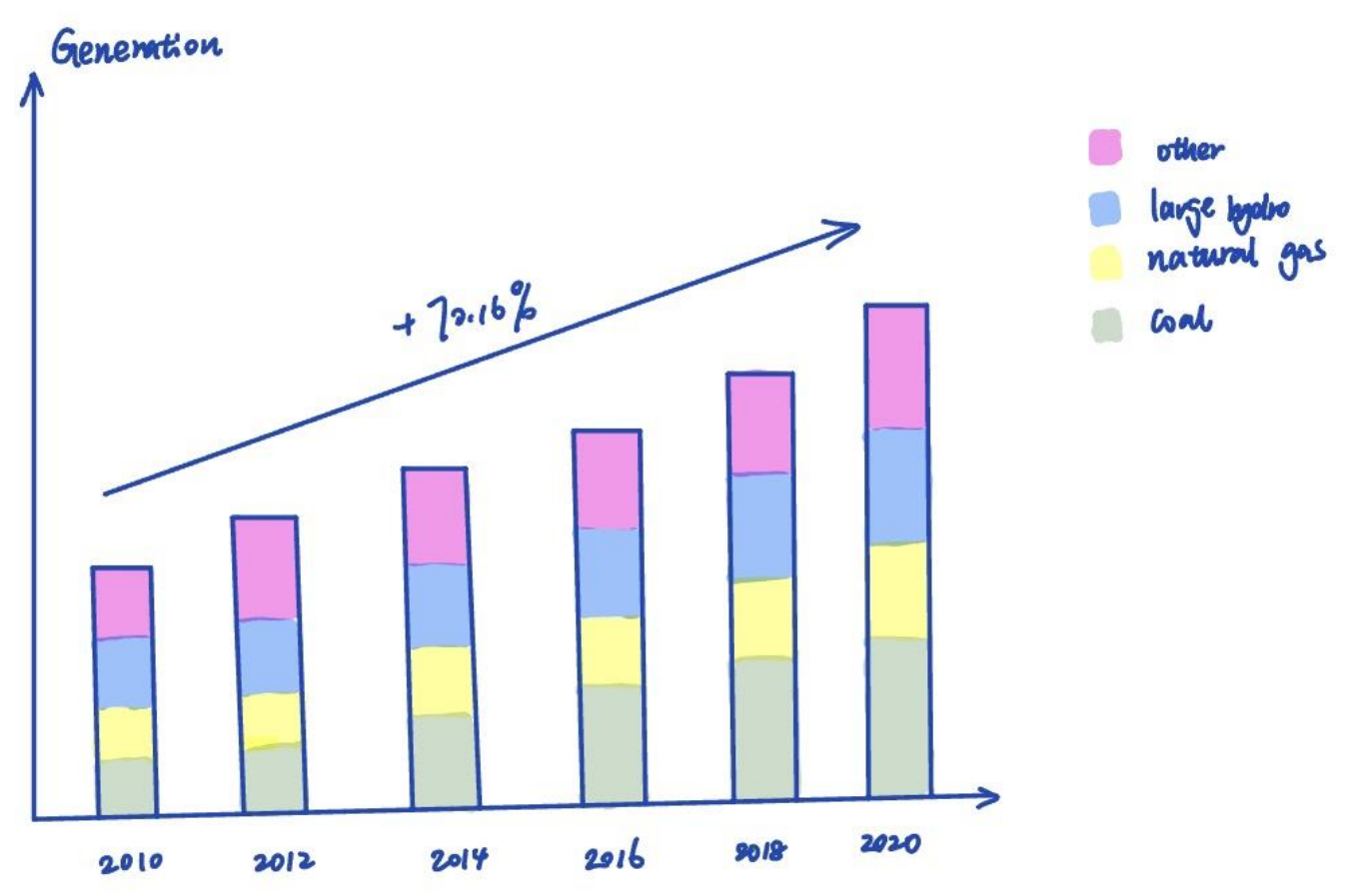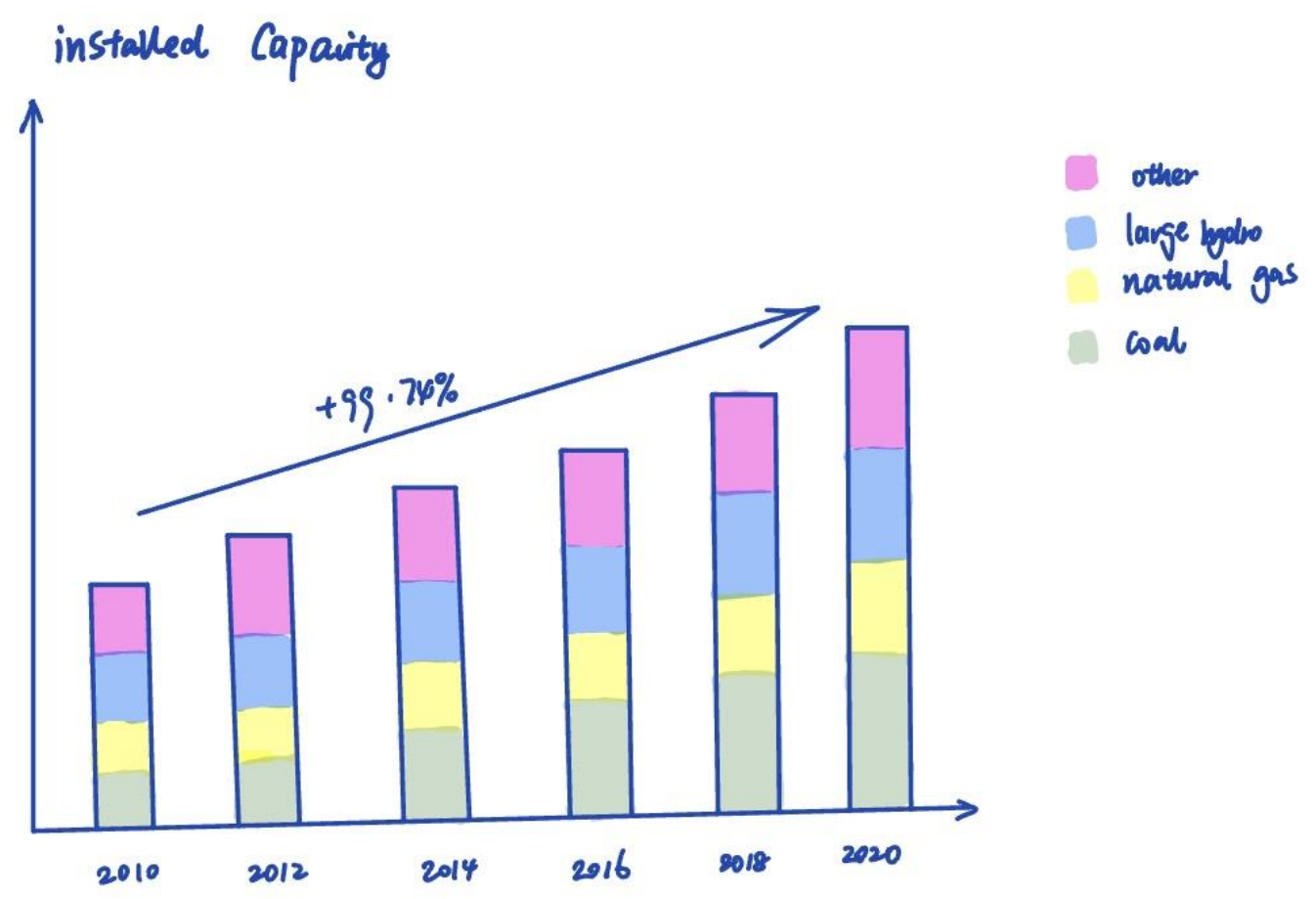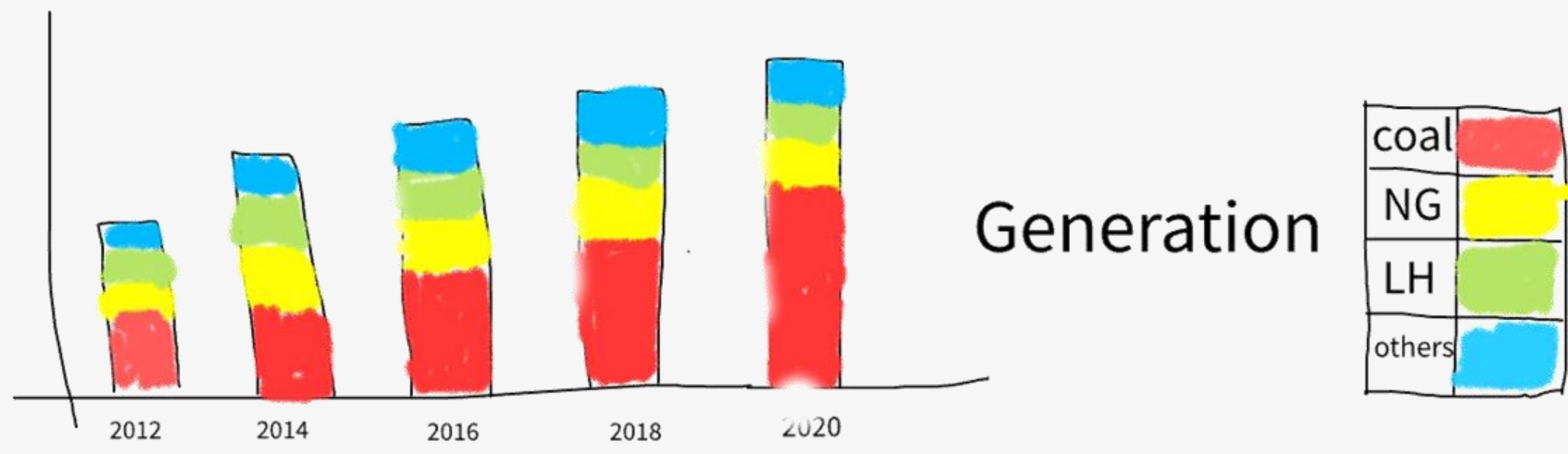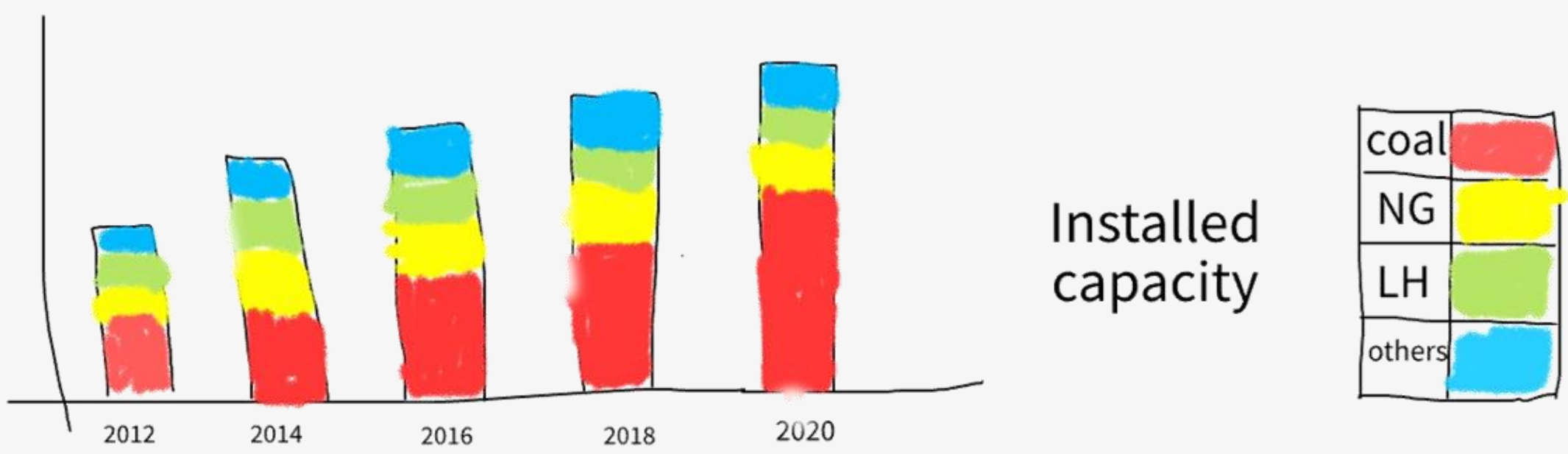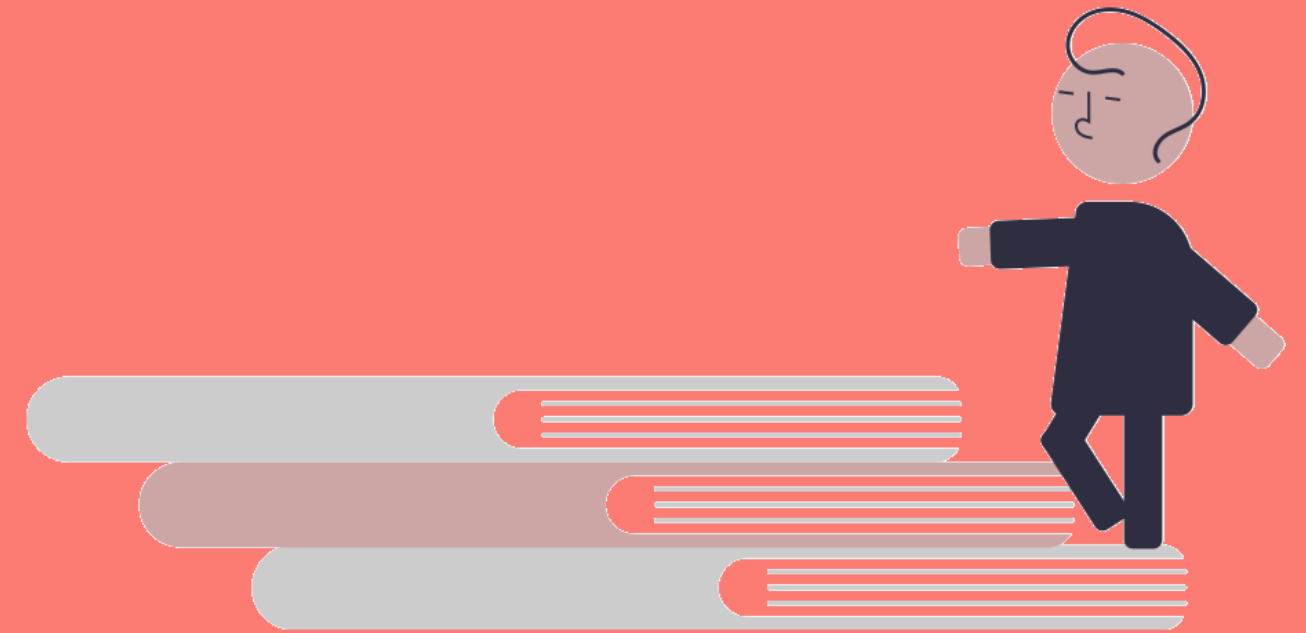# Generation

- other
- large hydro
- natural gas
- coal

+72.16%

2010 2012 2014 2016 2018 2020

Installed capacity

Generation

coal	
NG	
LH	
others	

The exercise was...

Assignment #4: Resume in Tableau

Final project

Discussion

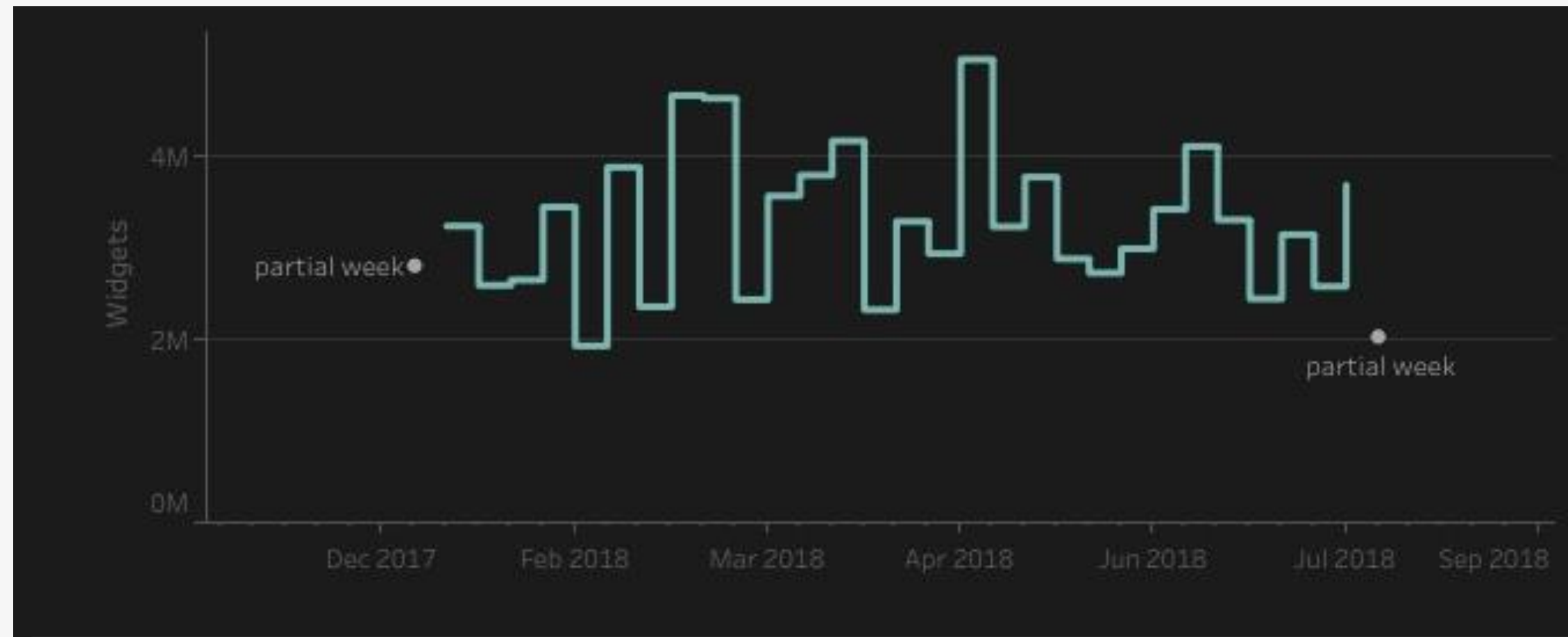Source: https://public.tableau.com/app/profile/adam.crahen/viz/VisualizingIncompleteTimeSeriesData/TimeSeries
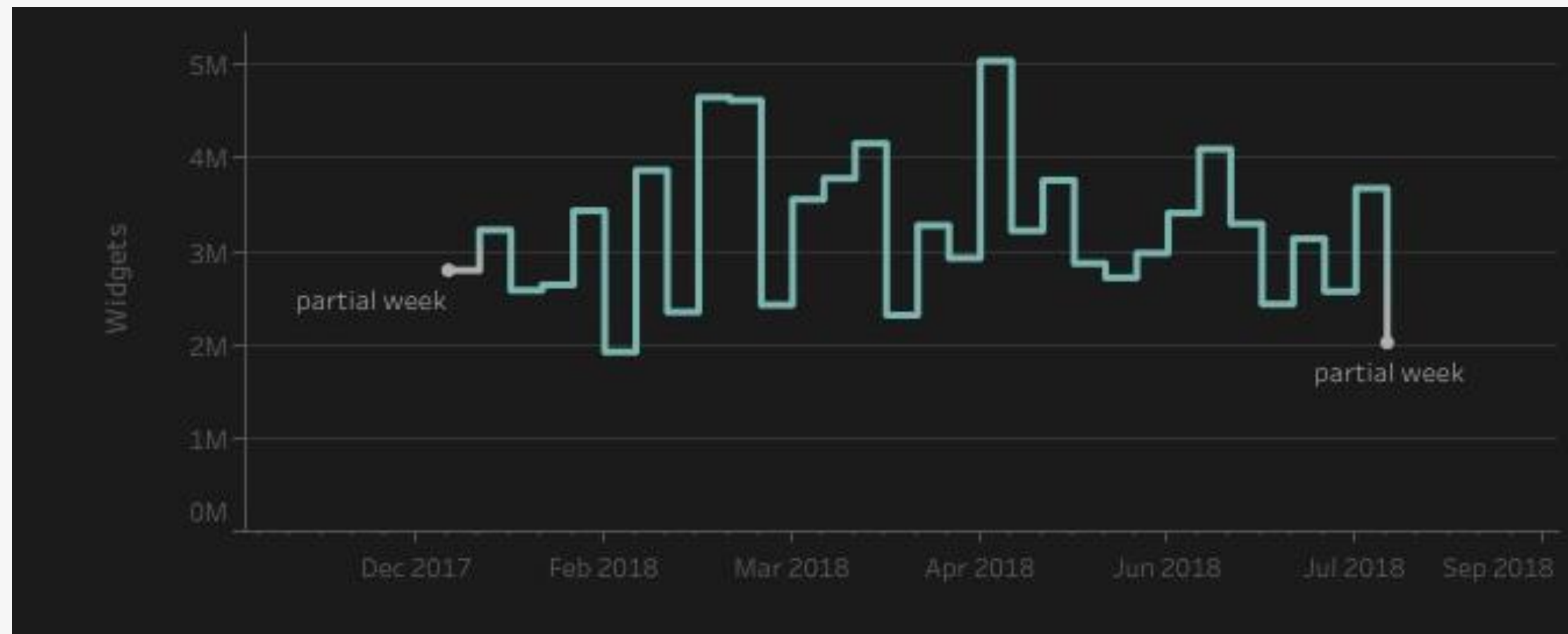
Step Break

Source: https://public.tableau.com/app/profile/adam.crahen/viz/VisualizingIncompleteTimeSeriesData/TimeSeries
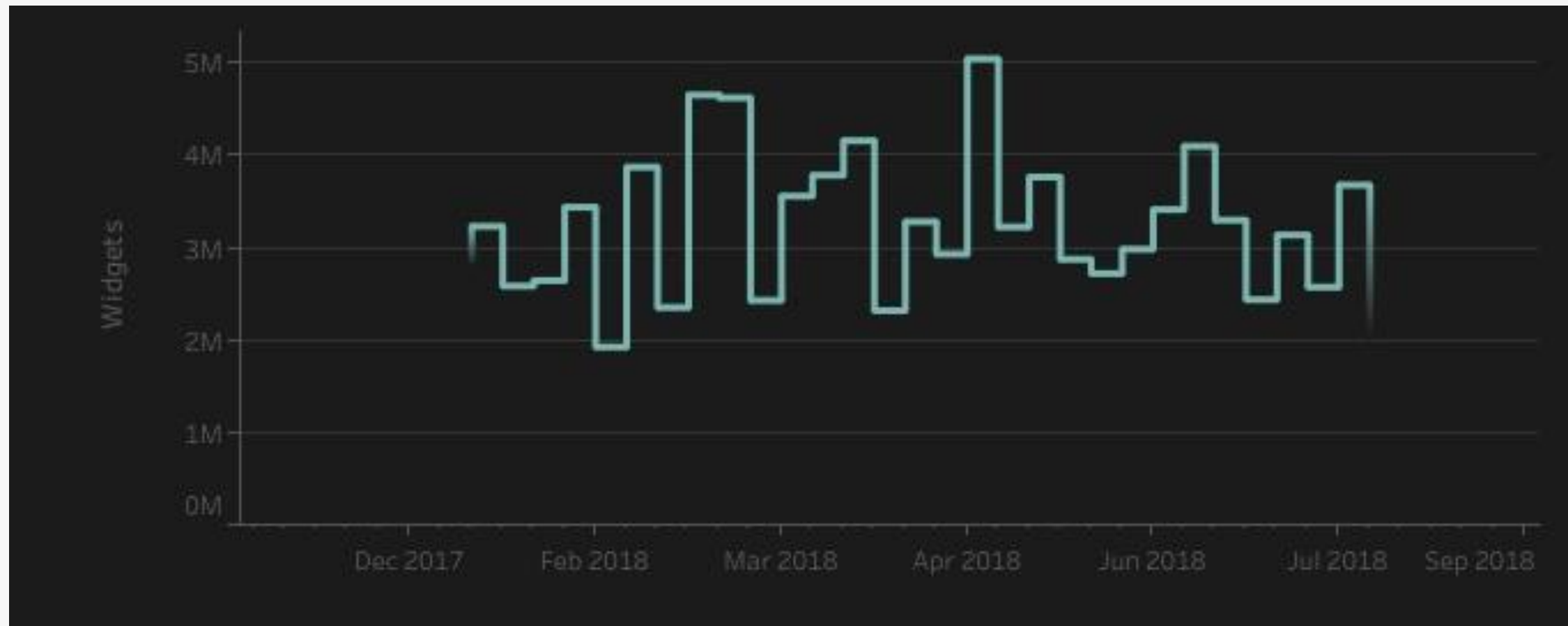
Break

Source: https://public.tableau.com/app/profile/adam.crahen/viz/VisualizingIncompleteTimeSeriesData/TimeSeries

Color

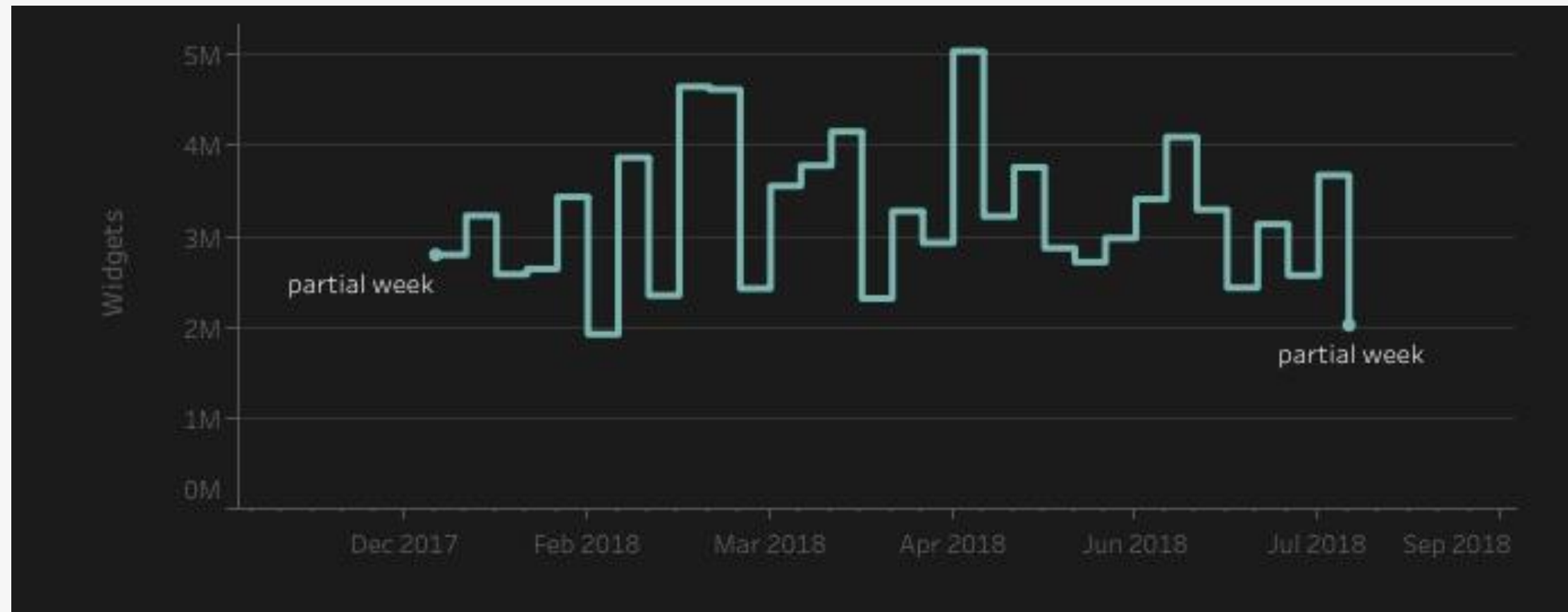Source: https://public.tableau.com/app/profile/adam.crahen/viz/VisualizingIncompleteTimeSeriesData/TimeSeries

Fade

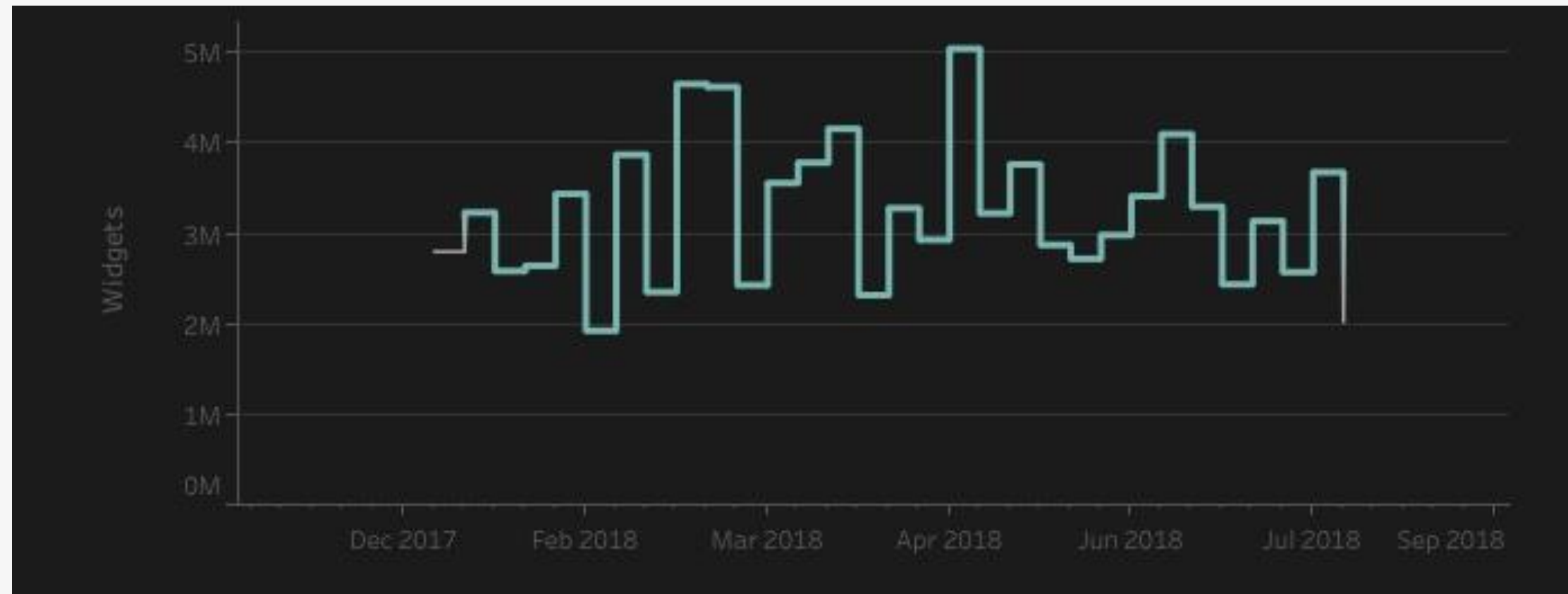Source: https://public.tableau.com/app/profile/adam.crahen/viz/VisualizingIncompleteTimeSeriesData/TimeSeries

Label

Source: https://public.tableau.com/app/profile/adam.crahen/viz/VisualizingIncompleteTimeSeriesData/TimeSeries

Size

EXERCISE

1. You work as an Analytics Manager and are asked to give a short presentation on the topic **Young and Adult Data Literacy Around the World**. Your audience is a group of **UNESCO executives** who are working with local governments to increase literacy rates.

2. Using the data *set Literacy Rates,* work in pairs select **three potential chart types**. Discuss the pros and cons of each chart type before choosing one. Also, is the chart type you selected to visualize likely **stored in your audience's long-term memory**?

3. Create the **chart in Tableau**.

4. How would you **present the chart to your audience**, taking into consideration whether your audience knows how to read and interpret the chart type? Practice presenting the chart with your classmate.

WHAT DID YOU LEARN?