



Tableau: Basic Mapping





HELLO!

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pianist





Creating complex visualizations without coding

In recent versions, Tableau made it possible to work with more data formats, such as shape files, as well as languages like R and Python.



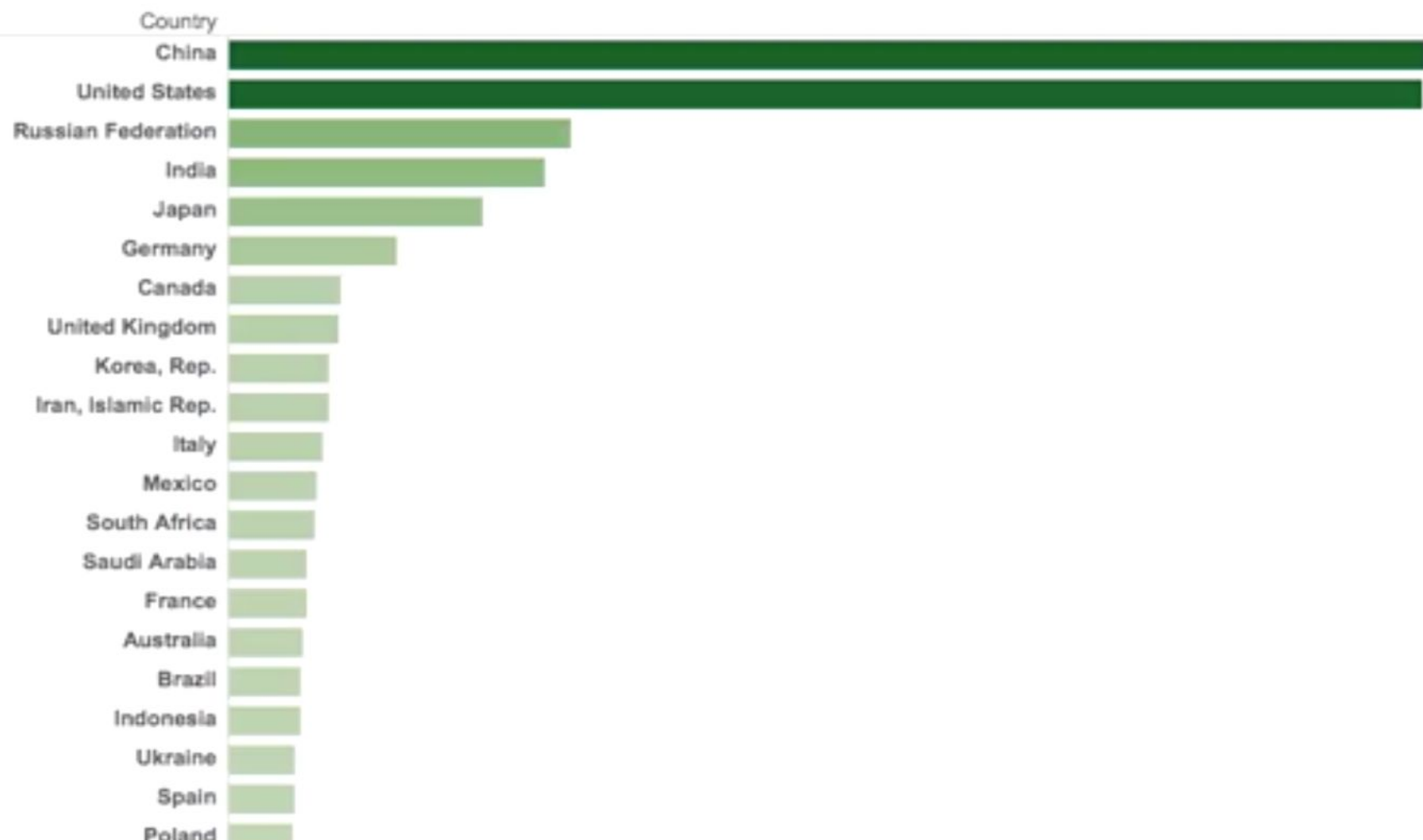
“Maps codify the miracle of existence.”
- Nicholas Crane

Maps are great, but...

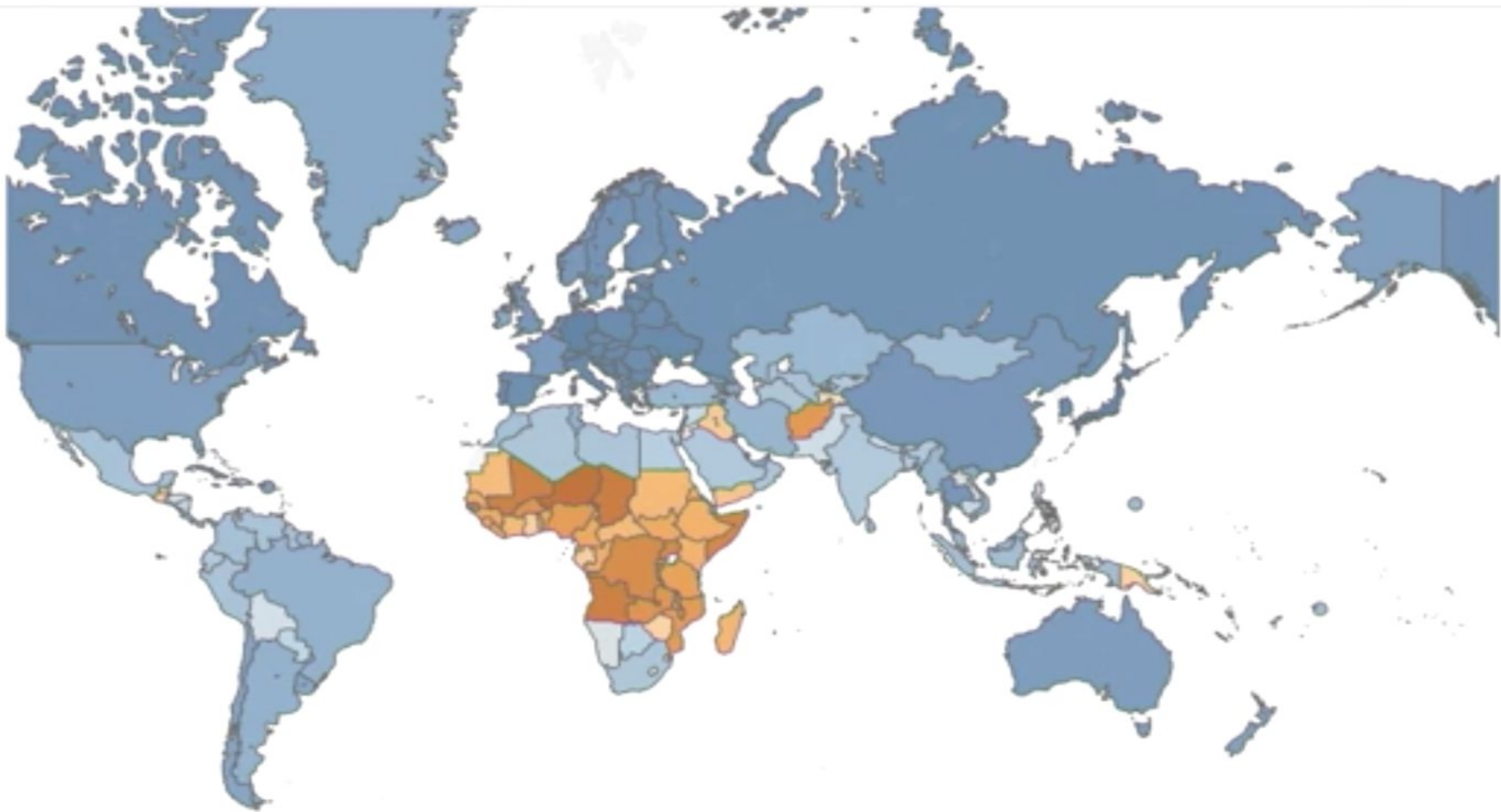
Emissions Map



Emissions Bar



Birth Rate Map




Birth Rate Bar





Geodata formats Tableau uses

- » place names that Tableau understands (e.g. countries, cities, states, zip codes)
 - ◇ Prone to input error
 - ◇ Tableau can't understand a stream of geodata coded as different measures (city & county mixed)
 - ◇ latitude/longitude coordinates
 - » shapefiles for custom-defined geo-areas (v.10.2 and above)
 - » KML
 - » GeoJSON
- 



Viz #1: U.S. Population



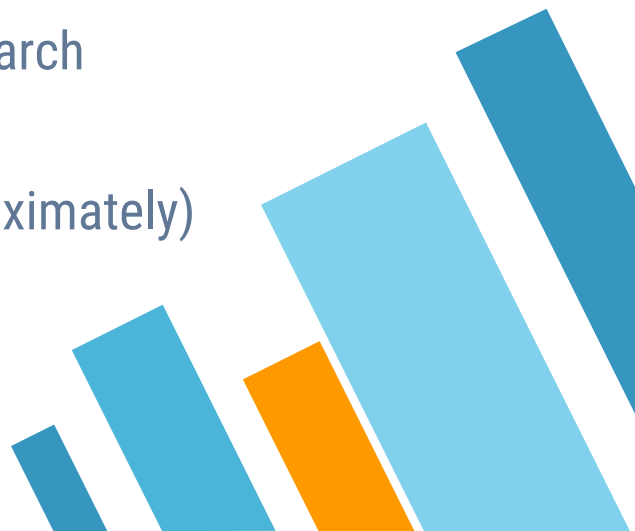


Viz #2: USGS Earthquake Data

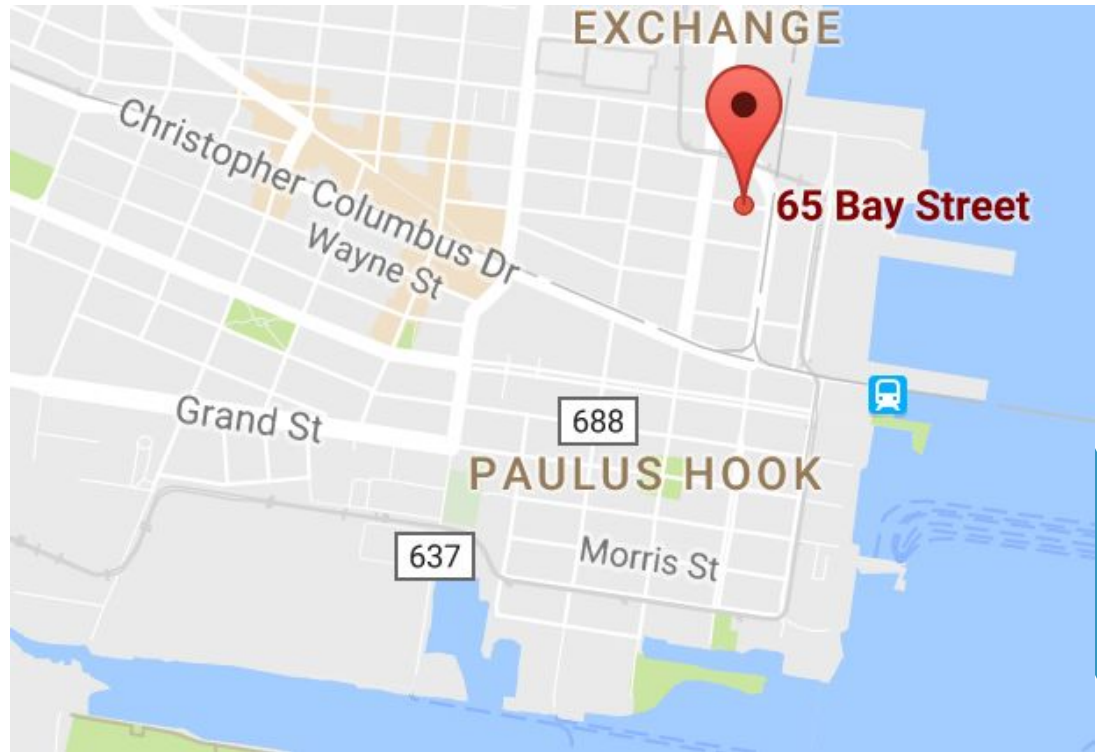
Retrieve data from USGS:

<https://earthquake.usgs.gov/earthquakes/search>

Filter all detected earthquakes in California (approximately)
in the past 30 days



When to use
additional map
layer?



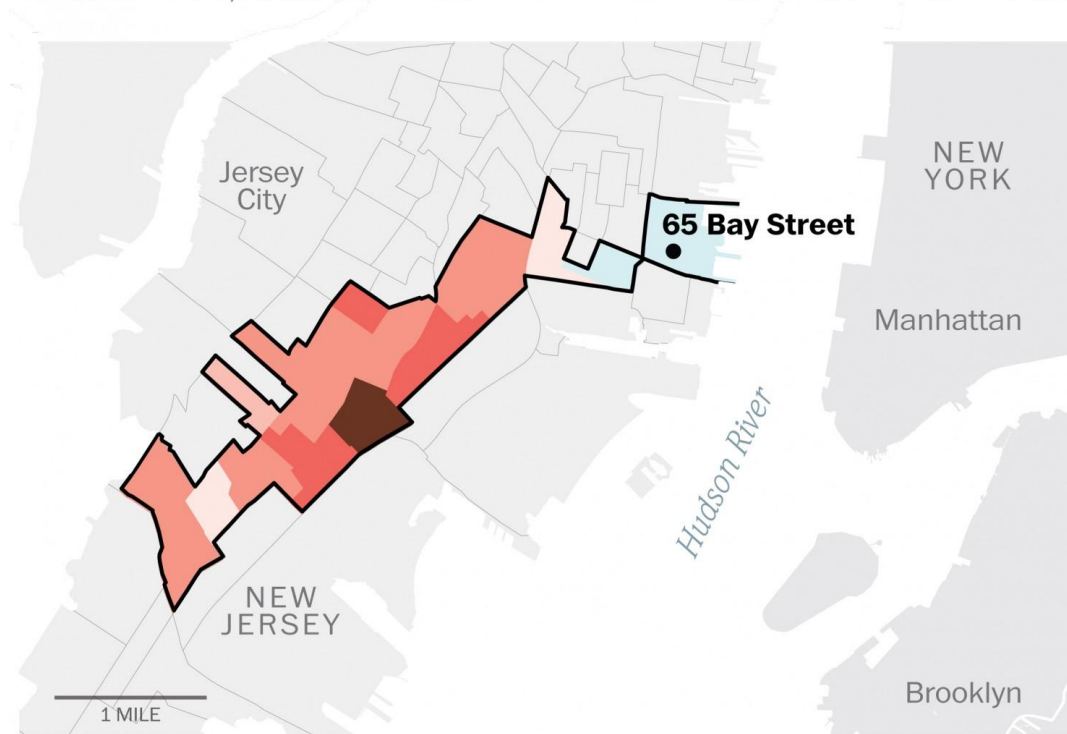
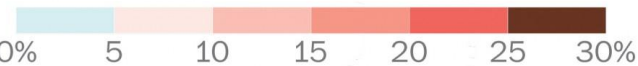
When to use additional map layer?

Only when they give important interpretive context to the top layer

How 65 Bay St. was deemed part of a needy area

In the final map approved by state officials, 16 census tracts were linked together to connect the affluent Jersey City waterfront to impoverished and crime-ridden neighborhoods nearly four miles away. This allowed the project to qualify for low-interest loans through a U.S. visa program.

UNEMPLOYMENT RATE PER
CENSUS TRACT, 2011-2015



Source: Census Bureau

ANDREW TRAN AND GABRIEL FLORIT/THE WASHINGTON POST



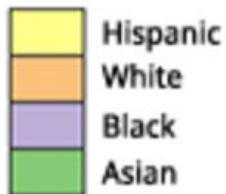
COLORS MATTER

Three schemes of color palettes

Qualitative

For representing nominal or categorical data. The colors imply no order or magnitude differences within the data.

Race or ethnicity



Sequential

for ordered data that progress from low to high. Lightness steps dominate the look of these schemes, with light colors for low data values to dark colors for high data values.

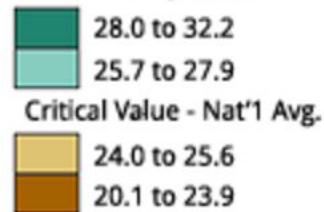
People per sq. mile



Divergent

Is the color of blood, and because of this it has historically been associated with sacrifice, danger and courage.

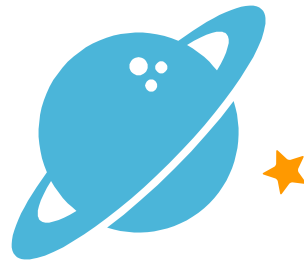
Percent of population under 18 by state









Pollev.com/tommyxie265

Tips on mapping in Tableau




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- » Know when to use a map and when to use other types of visualization
 - » When using one legend for multiple maps/charts in the dashboard, make sure that the scale of the legend applies to all the maps/charts

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- » When mapping data to either size or color, think about:
 - ◇ If the data is a dimension (discrete data) or measure (continuous data)
 - ◇ Will size or color cause any unintended meaning to the audience?
 - » Map layers should give reciprocal, interpretive cues to each other
 - » Use Mapbox.com to customize visual styles, with good taste.
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A stylized world map in white and light blue is centered on a dark blue background. The word "Challenge" is written in a large, bold, red sans-serif font across the middle of the map. The background is decorated with several diagonal stripes in varying shades of blue, creating a modern, geometric aesthetic.

Challenge



Here are some data released by the World Bank. As a storyteller, you will use Tableau Public to create two maps with a topical focus. For example, you may look into population issues (e.g. overall growths, certain age groups' increase/decline) globally and then in the second map look at the issue in South Asian countries. The key is that the two maps will need to revolve around a bigger topic, rather than one map of the GDPs of North America and another of health expenditure in Congo. You may limit indicators, regions, or years to narrow down your focus.

Feel free to use any strategies we discussed in the workshop.



LEARNING Resource

Tableau 10 free training videos
tableau.com/learn/training

Tableau Live training webinars
tableau.com/learn/live-training-resources

Tableau YouTube channel

Tableau user community
community.tableau.com/welcome

Coursera.com

Lynda.com/Udemy.com



THANKS!

Any questions?

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