

Web Maps & Visualization

What are we going to learn today?

A Detailed Political Geography of the U.S.

A horizontal bar chart comparing the support percentages for John McCain and Mitt Romney in the 2008 election. The x-axis represents the percentage of voters from 0% to 100%. The y-axis lists the candidates: John McCain, Sarah Palin, Mitt Romney, and Ron Paul. The bars show the following approximate values:

Candidate	Support (%)
John McCain	47%
Sarah Palin	46%
Mitt Romney	40%
Ron Paul	3%

On election night, the most detailed map you are likely to see will show results by county. This map shows 2002 presidential election results for every ZIP code in the country. This level of detail reveals patterns that are otherwise masked — like the presence of small, Democratic urban areas even in the reddest states, and the stripes of red, yellow and blue along Long Island in New York.

What Hillary Clinton Sees in This Map

More Hispanic Voters

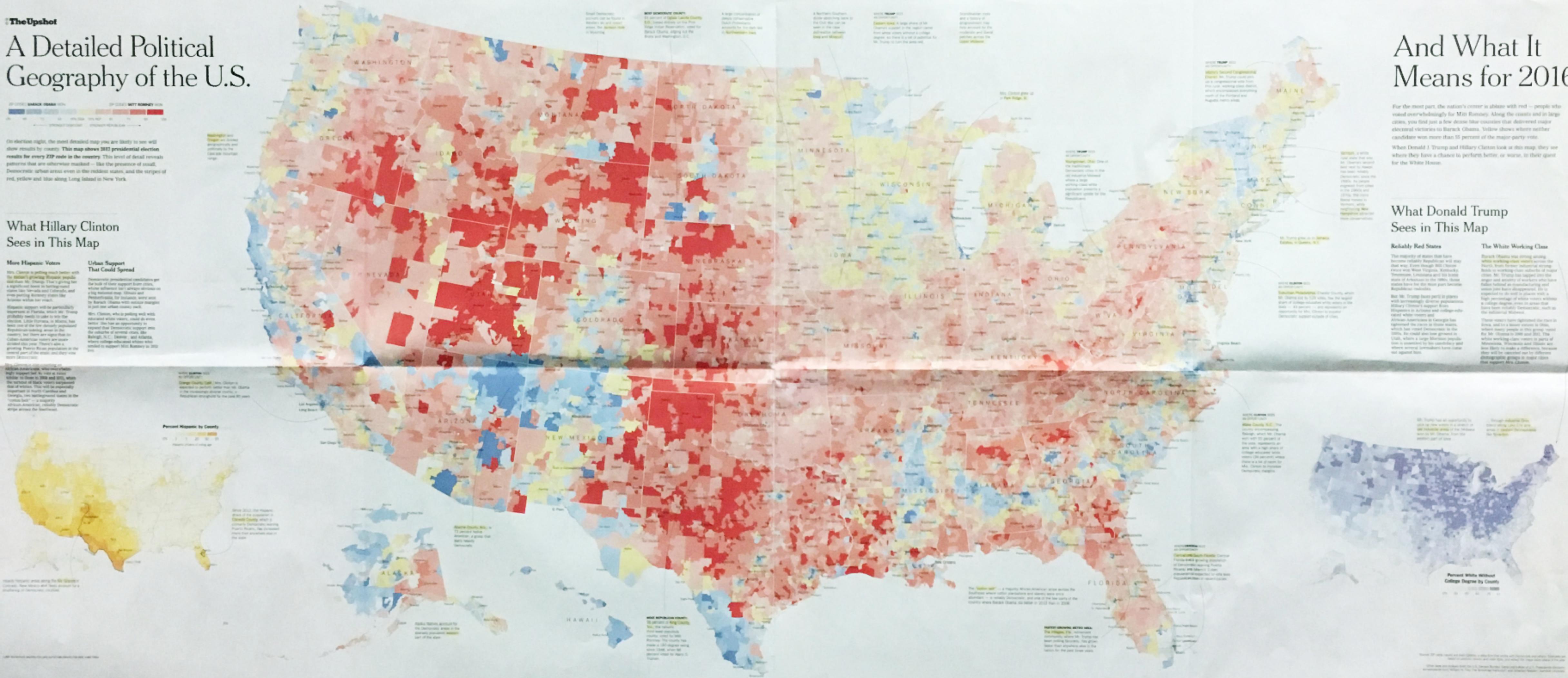
Mrs. Clinton is polling much better with the nation's growing Hispanic population than Mr. Dole. That's giving her a significant boost in battleground states like Nevada and Colorado, and even putting Romney states like Arizona within her reach.

Hispanic support will be particularly important in Florida, where Mr. Trump probably needs to take to win the election. Little Havana, in Miami, has been one of the few densely populated Republican-leaning areas in the country, but there are signs that its Cuban-American voters are more divided this year. There's also a growing Puerto Rican population in the central part of the state, and they vote more Democratic.

Urban Support That Could Spark

Democratic presidents have won the bulk of their support from urban voters for a long national time. Pennsylvania, for instance, by Barack Obama's win in just one urban county.

Mrs. Clinton, who grew up in educated white-voter families, is polling better than her opponent from the suburbs of several swing states. Raleigh, N.C., Dallas, and other college-educated areas tended to support Mr. Trump.



And What It Means for 2016

For the most part, the nation's center is ablaze with red — people who voted overwhelmingly for Mitt Romney. Along the coasts and in large cities, you find just a few dense blue counties that delivered major electoral victories to Barack Obama. Yellow shows where neither candidate won more than 50 percent of the major-party vote.

When Donald J. Trump and Hillary Clinton look at this map, they see where they have a chance to perform better, or worse, in their quest for the White House.

What Donald Trump Sees in This Map

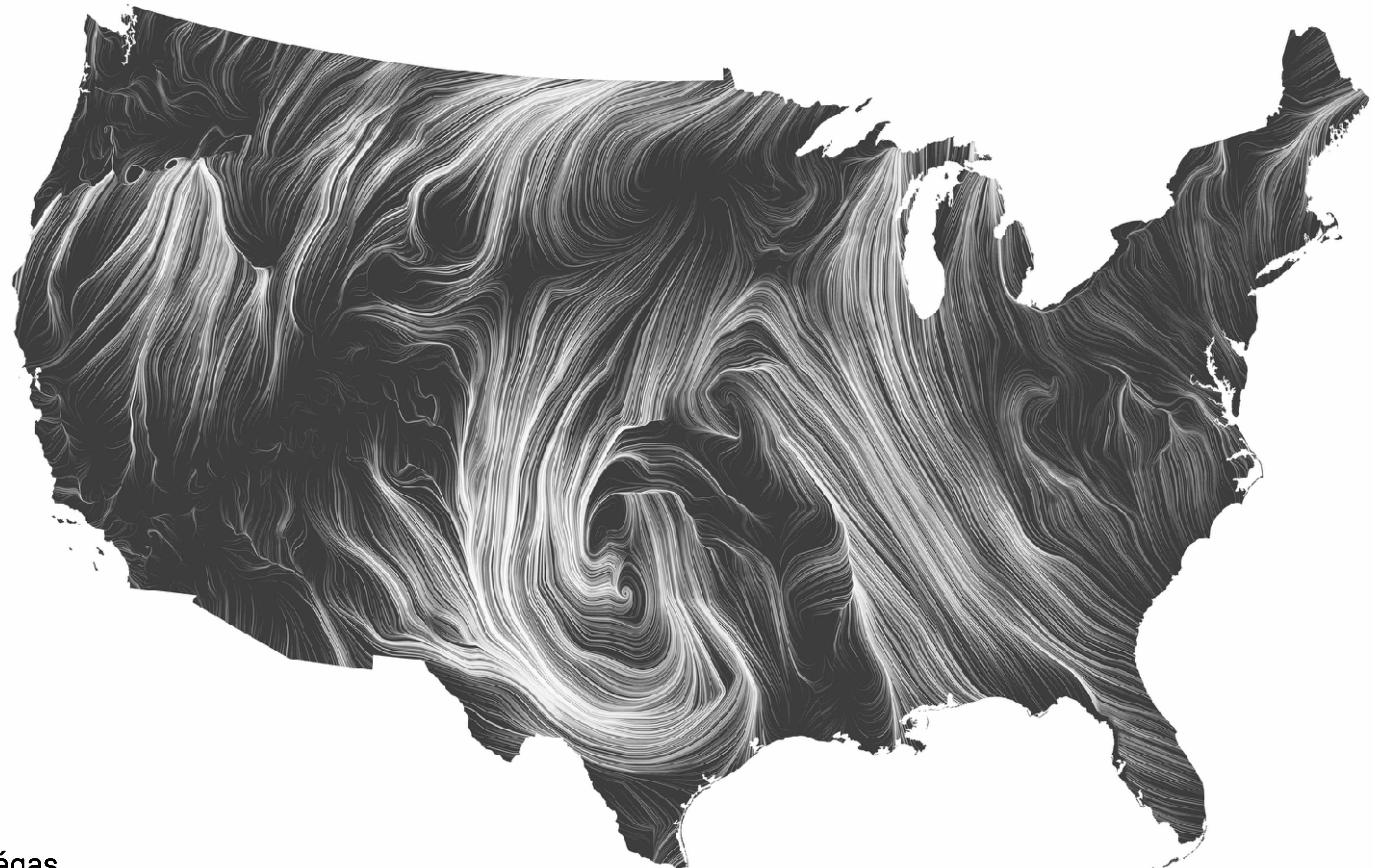
The majority of states that have become reliably Republican will stay that way. Even though Bill Clinton twice won West Virginia, Kentucky, Tennessee, Louisiana and the lone state of Arkansas in the 1980s, those states have for the most part become Republican redoubts.

But Mr. Trump has won in places with increasingly diverse populations. Hillary Clinton's support from African Americans and college-educated white voters and African Americans in Georgia has righted the scales in those states, which had voted Democratic in the 1980s. He could also lose ground in Utah, where a large Mormon population is unswayed by his callousness and where several lawmakers have come out against him.

Barack Obama was strong among white working-class voters across the North, from former industrial强州 to working-class suburbs of major cities. Mr. Trump has tapped into the anger and anxiety of workers who have fallen behind as manufacturing and union jobs have disappeared. He is expected to do well in places with a high percentage of white voters without a college degree, even in areas that have been solidly Democratic, such as the industrial Midwest.

These voters have righted the scale in Iowa, and to a lesser extent in Ohio, where many people in this group voted for Mr. Obama in 2008 and 2012. The white working-class centers in parts of Minnesota, Wisconsin and Illinois are less likely to make a difference, because they will be swayed not by different demographic groups in major cities like Milwaukee, Des Moines or Chicago, but by the same ones that have been swayed by Mr. Obama.

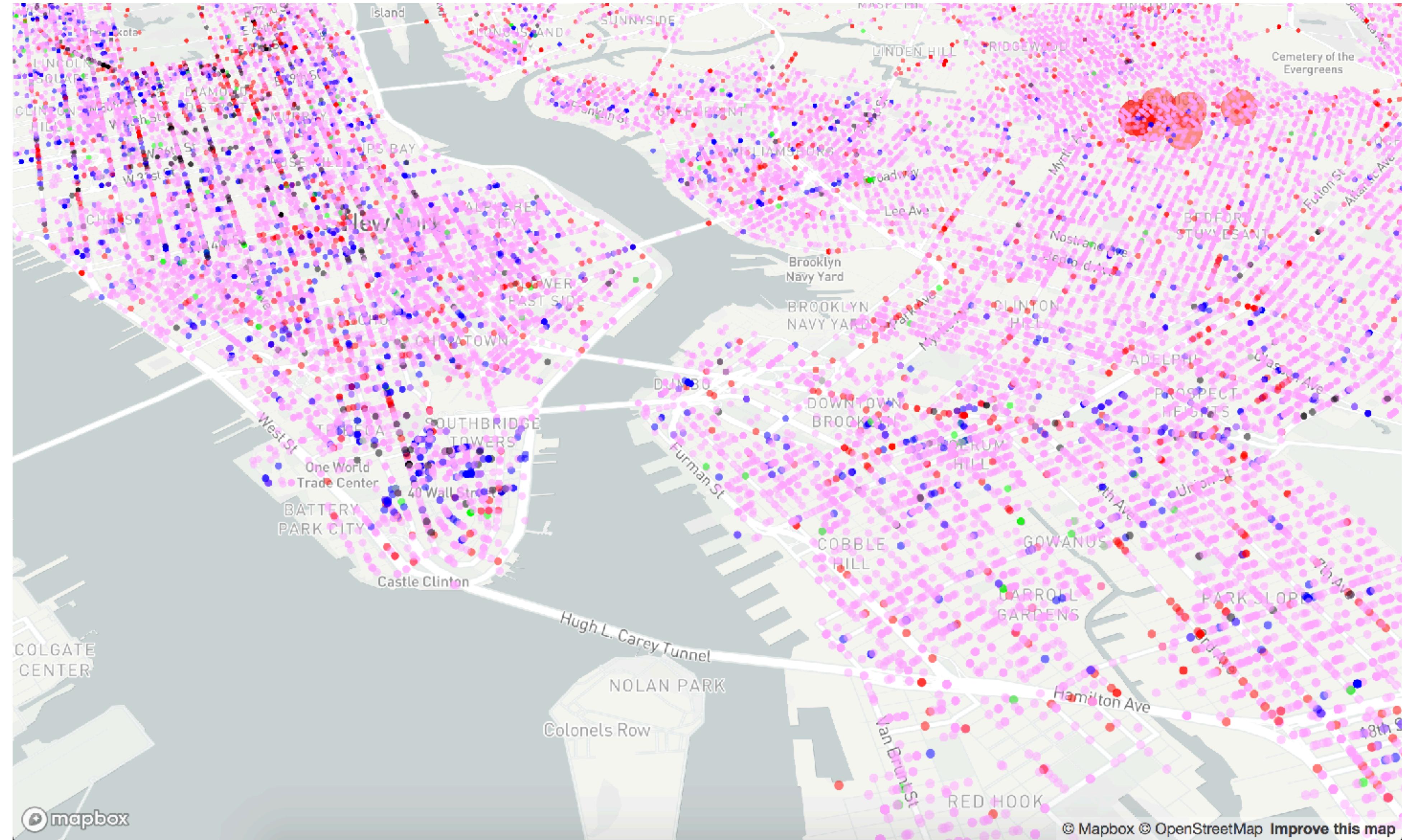
A choropleth map of the United States showing the percentage of white non-college-educated adults by county. The map uses a color gradient from light blue to dark purple to represent the data. The highest concentrations are found in the southern states, particularly Mississippi, Louisiana, and Alabama, as well as in parts of the West Coast like California and Oregon.



Wind Map

Fernanda Viégas

Martin Wattenberg

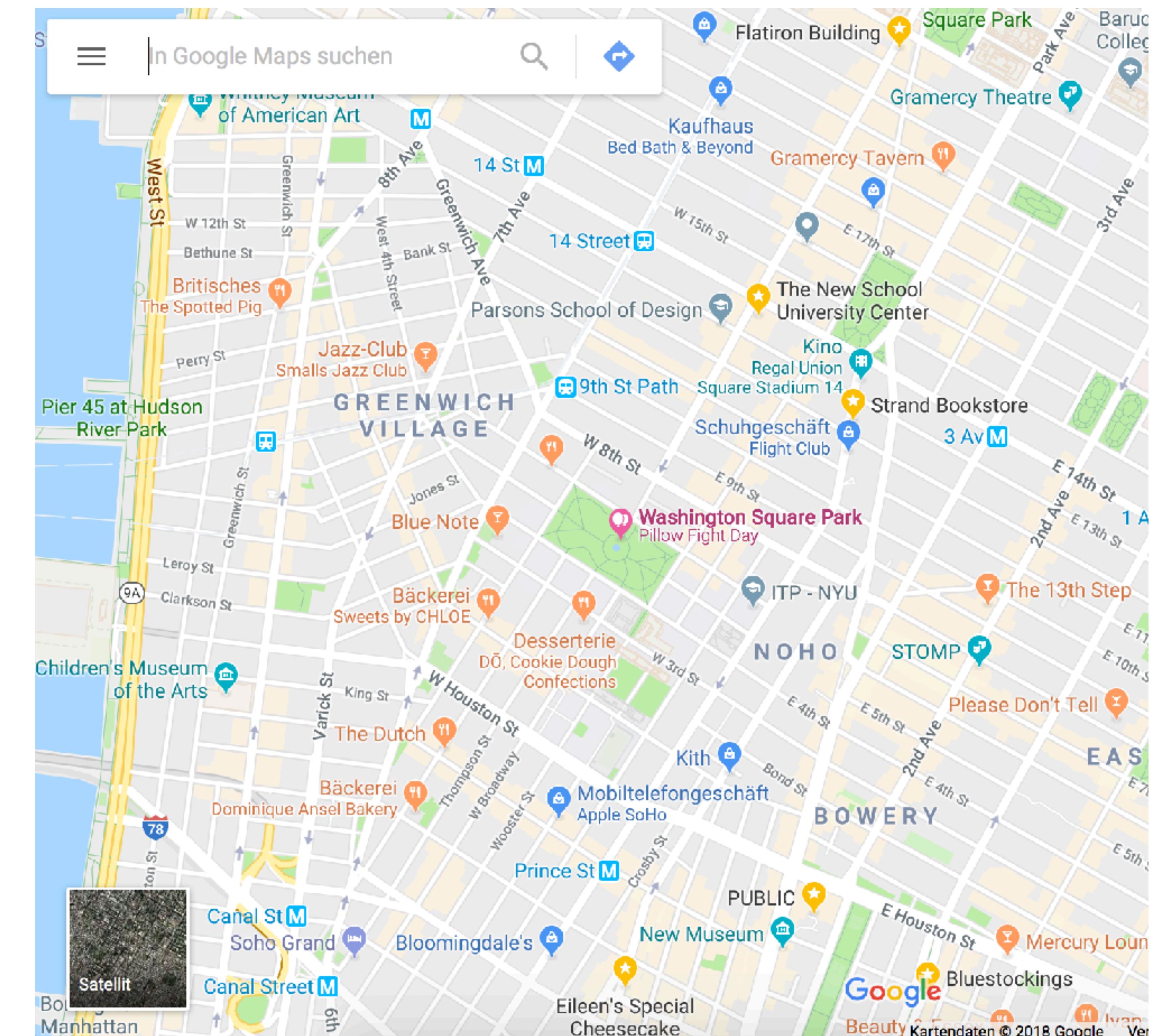


You

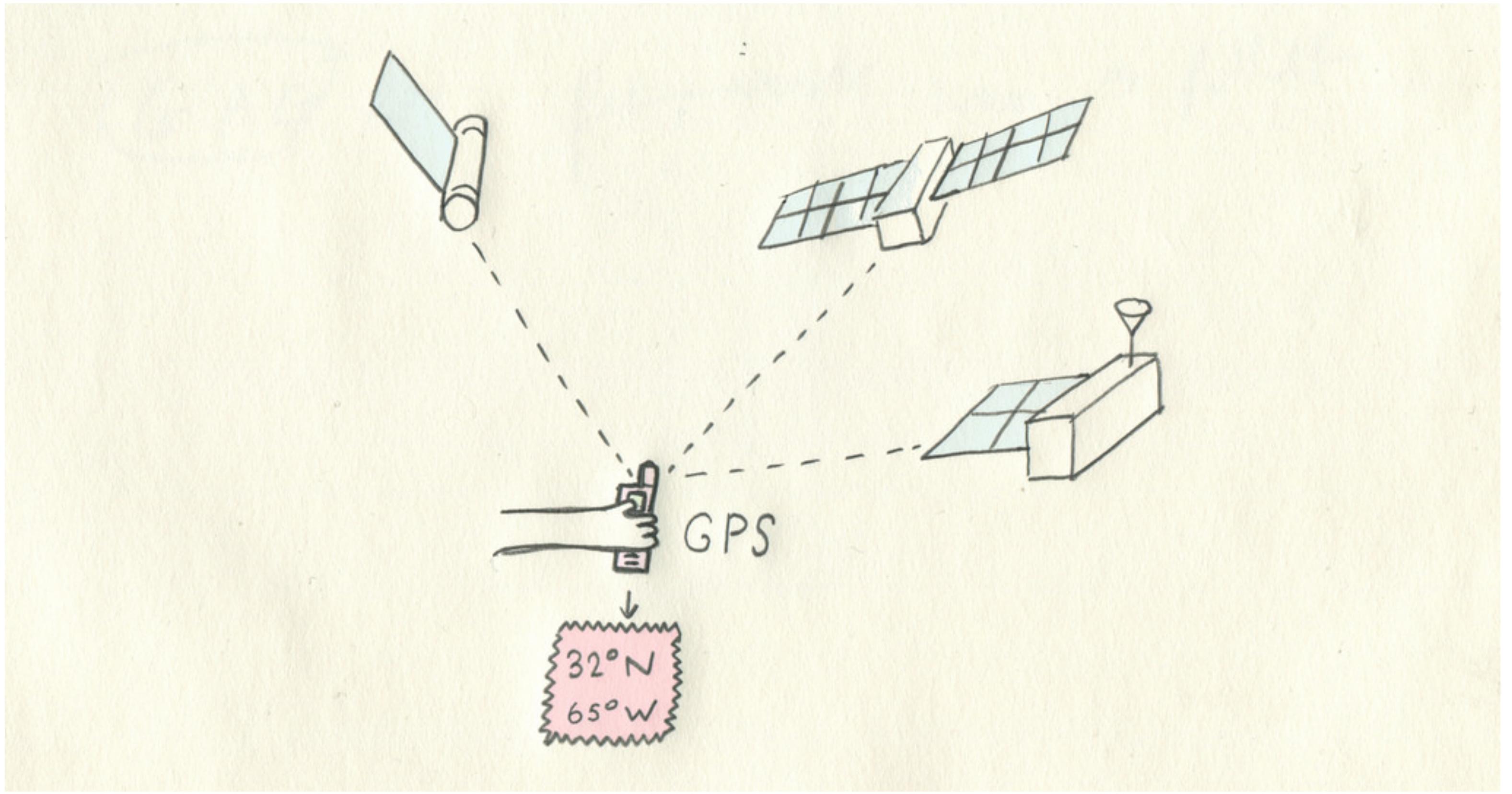
Maps



Map of Nippur, 14th/13th c. BCE



Google Maps, New York, 2018

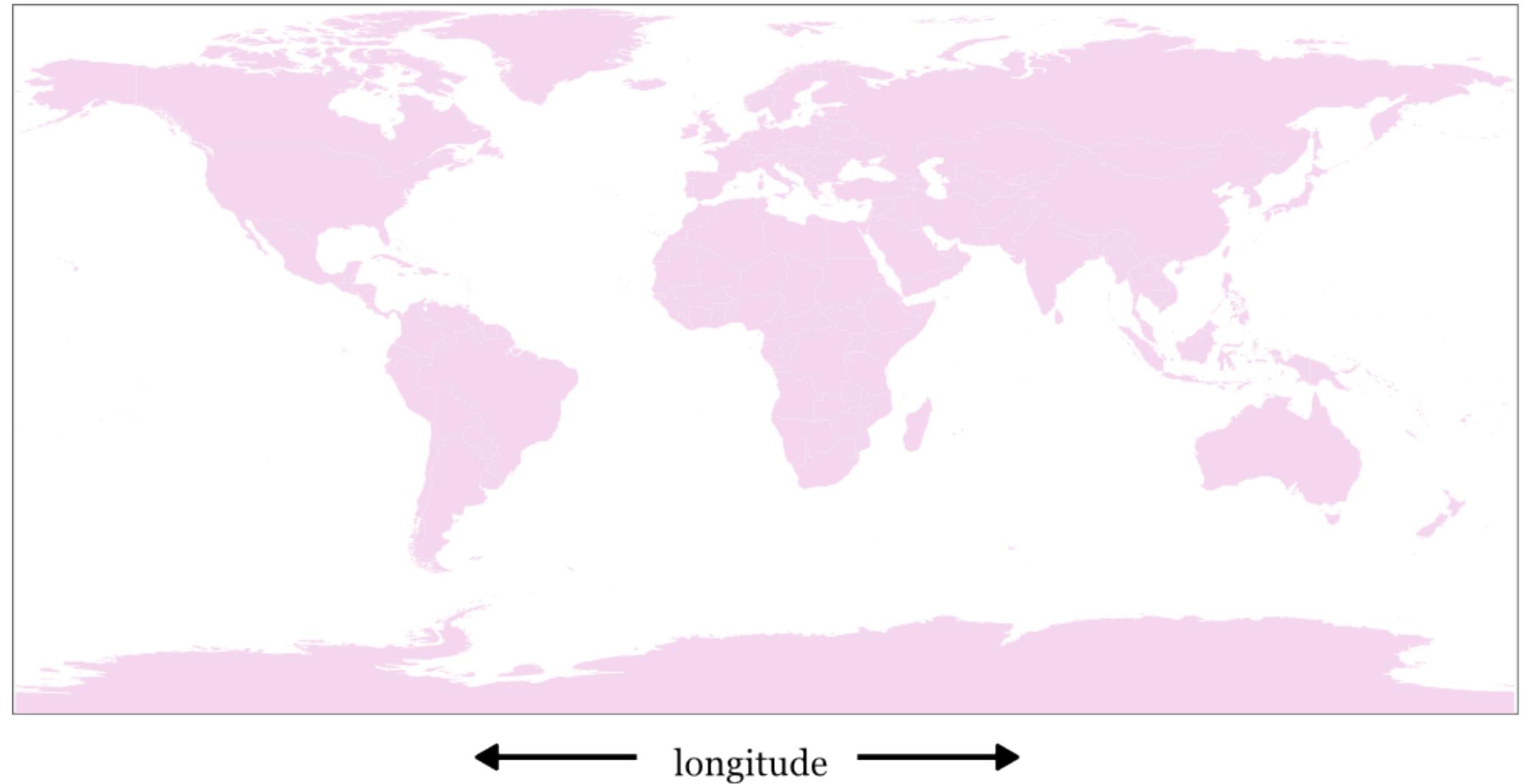


Coordinates

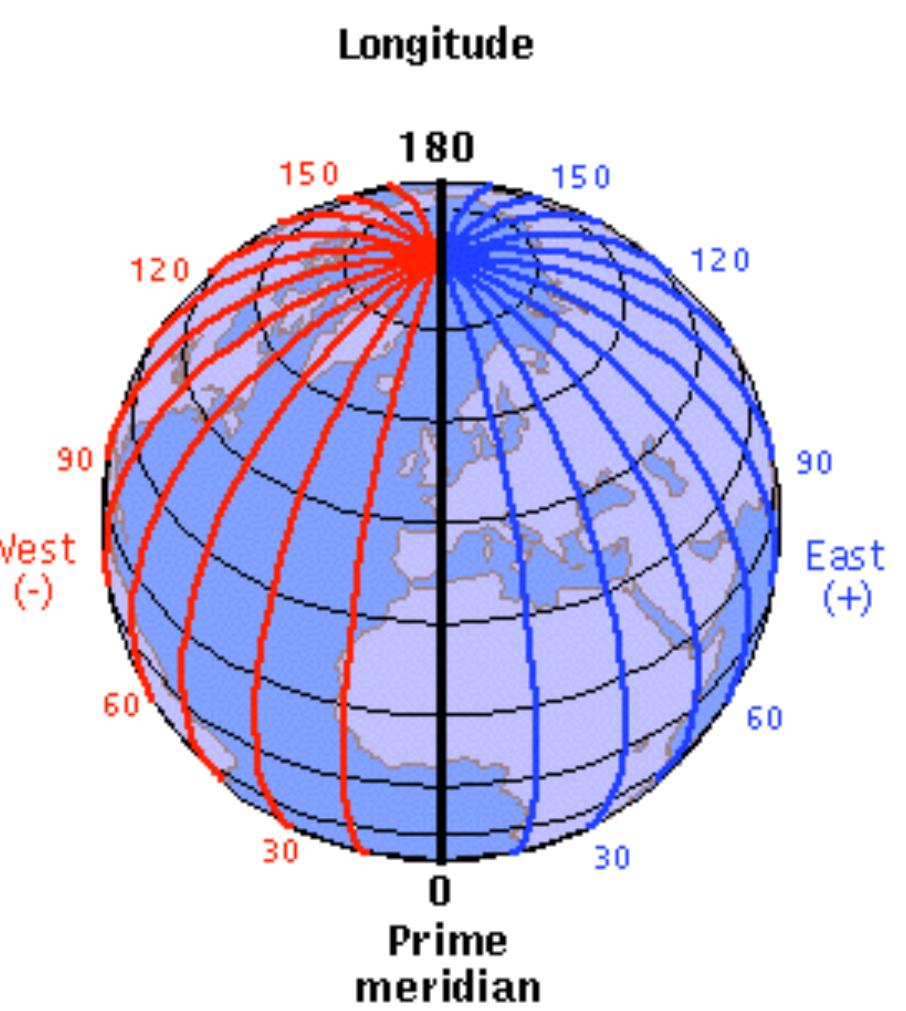
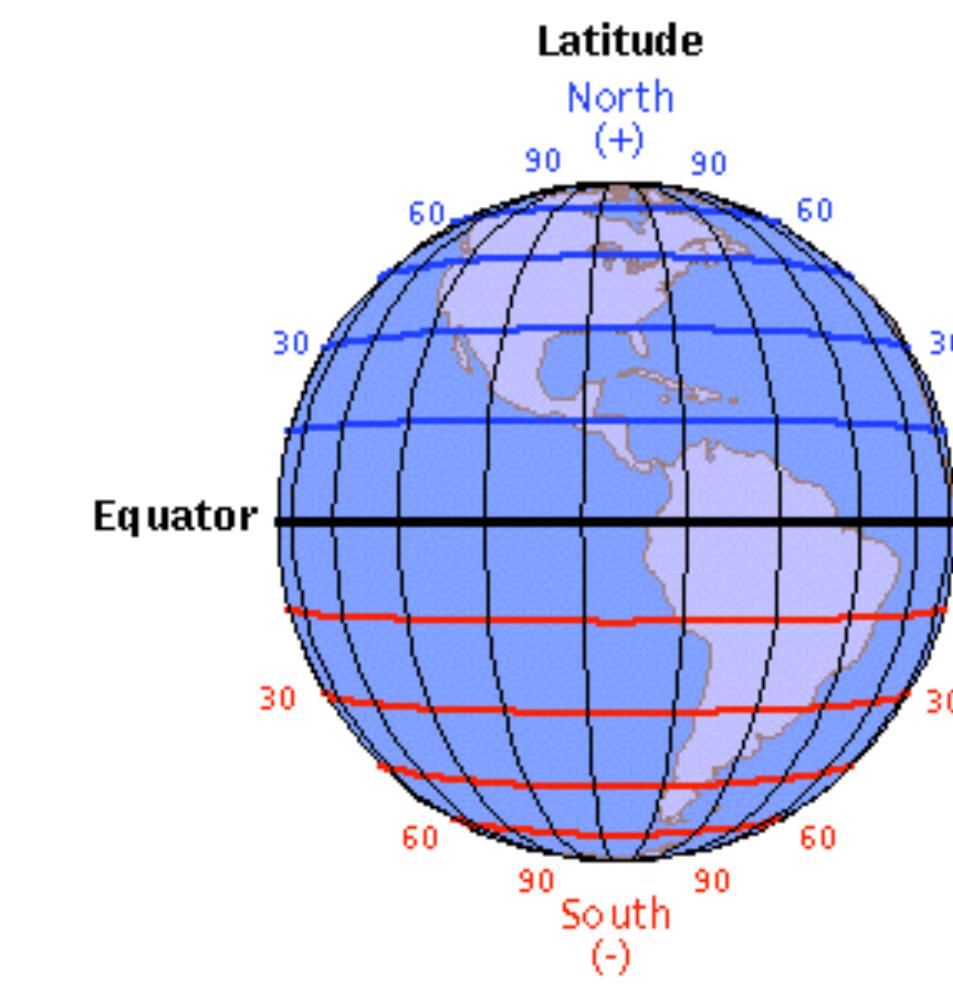
37° 46' 42"N, 122° 23' 22"W

37.77833, -122.38944

Coordinates



↑
latitude
↓



Projections

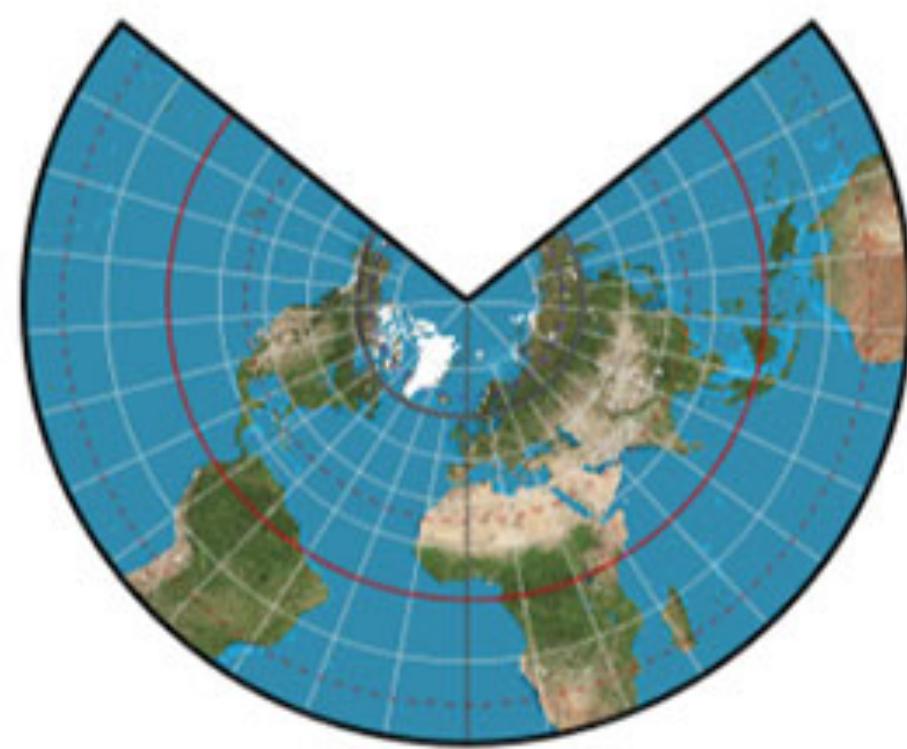
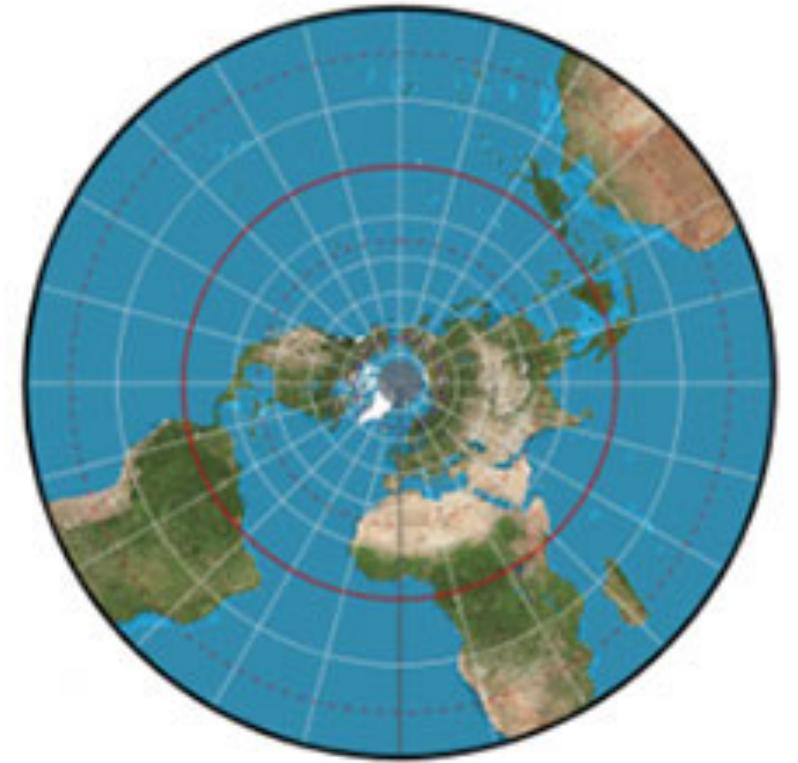
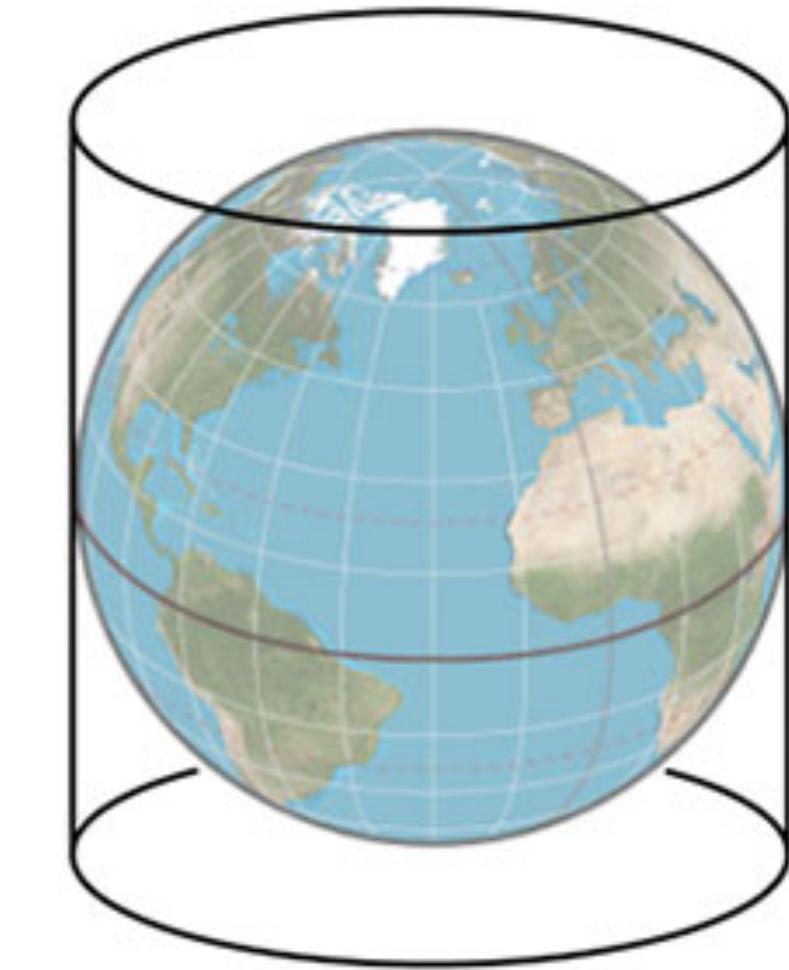
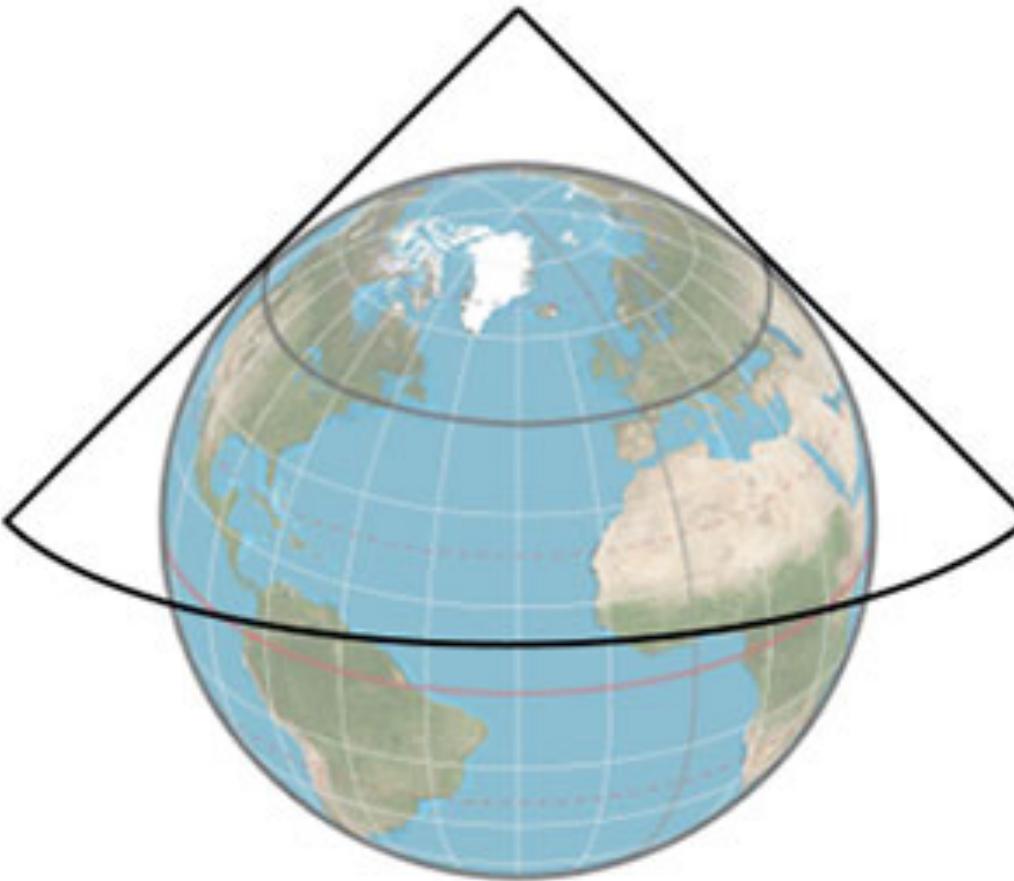
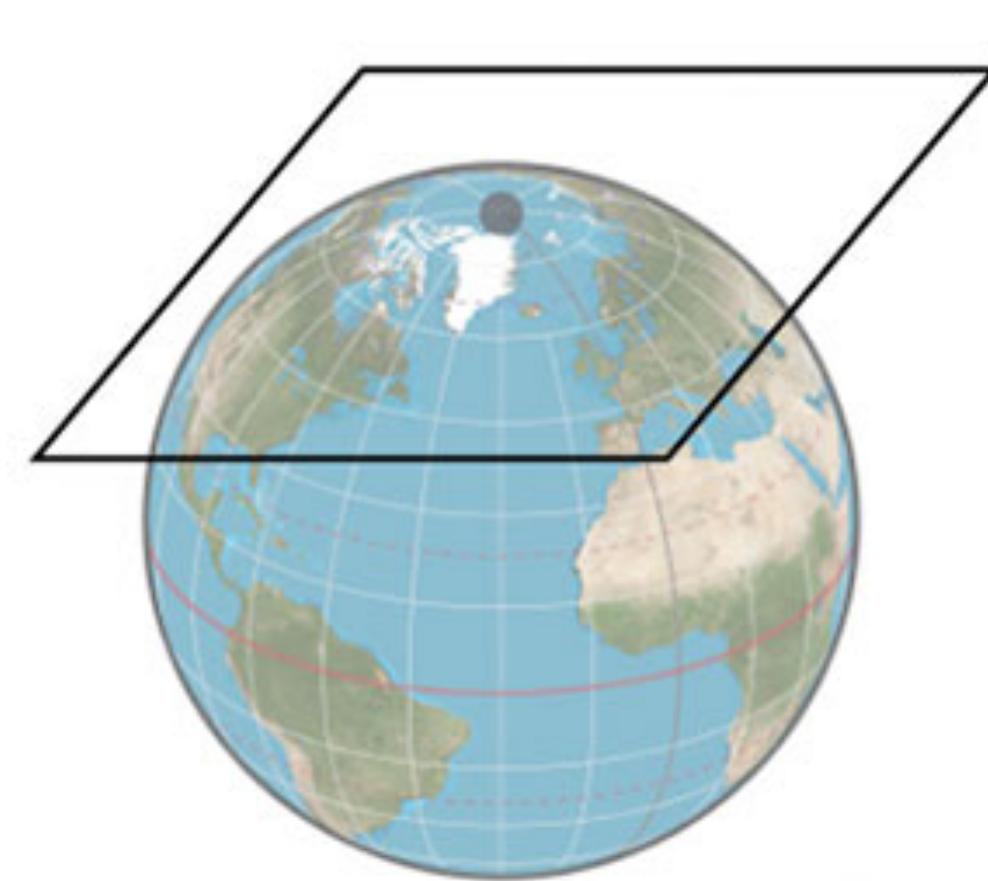


Image: quedeus.com/az/tehrif-nedir/

<https://www.jasondavies.com/maps/transition/>

Geodata: Raster



Image: mapschool.io

Geodata: Vector

Point



0, 0

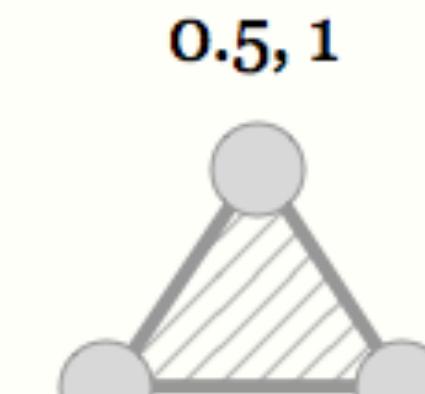
Line



0, 0

1, 0

Polygon



0, 0

1, 0

Geodata: Formats

.shp

.geojson

.csv



online tools
ogr2ogr
...

GeoJSON

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    "capital": "Denver"  
  }  
}
```

www.geojson.io

geojson.io/#map=16/40.6873/-73.9144

Open Save New Share Meta unsaved GitHub Gist GeoJSON TopoJSON CSV KML WKT Shapefile

+/ JSON Table Help anon | login

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3 "features": [
4 {
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15]
16 }

BROADWAY CORNELIA ST JEFFERSON AVE EVERGREEN AVE HANCOCK ST WEIRFIELD ST HALSEY ST ELDERST COVERT ST SCHAEFER ST EVERGREEN AVE DECATUR ST COOPER ST Saratoga Park Halsey Street (I) MACDONOUGH ST THOMAS S. BOYLAND ST BAINBRIDGE ST CHAUNCEY ST ROCKAWAY MARION ST 100 m 500 ft Chauncey Street (I.Z) Bushwick Health Center

Mapbox Satellite OCM OSM

Visualization without code

mapbox.com

1 **Tilesets** Tilesets

2 New tileset

3 Notifications

Mapbox Studio Studio Account

Home Styles Tilesets Datasets

Tilesets

Search Sort by Name Modified Size New tileset

5 Default tilesets

Terrain (RGB-encoded dem)
Default tileset Menu

Mapbox Satellite
Default tileset Menu

Mapbox Streets v7
Default tileset Menu

Mapbox Terrain V2
Default tileset Menu

What is a tileset?

A tileset is a collection of raster or vector data broken up into a uniform grid of square tiles at 22 preset zoom levels. [Read more.](#)

How to create tilesets

Click **New tileset** to upload your data. Mapbox renders [vector tiles](#) from your data so you can create

Notifications

Uploads

- Succeeded 2 minutes ago [map 79gewe >](#)

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www.mapbox.com/studio/ 13

mapbox

Studio

1 Studio Account

Home Styles Tilesets Datasets

Your latest style

Bright
Published 21 hours ago • Private

See your access tokens

Read the Studio Manual for a complete guide.

Get started

Customize a map style
Use the style editor to design custom maps.

Create a style >

2 Visualize your data
Upload data as a tileset and add it to a style.

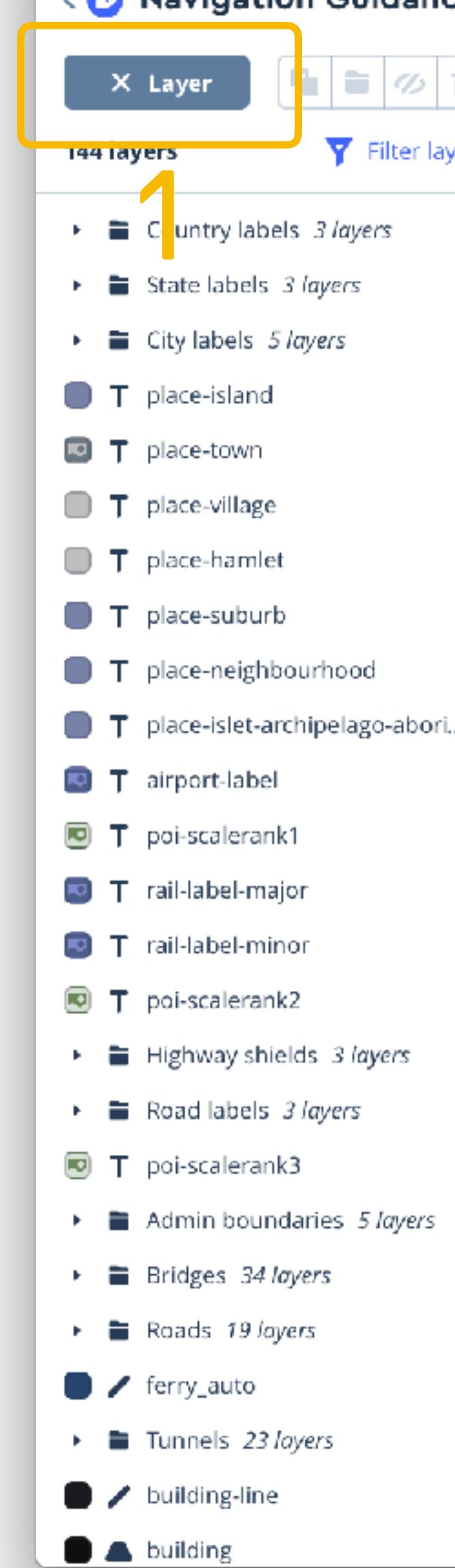
Create a tileset >

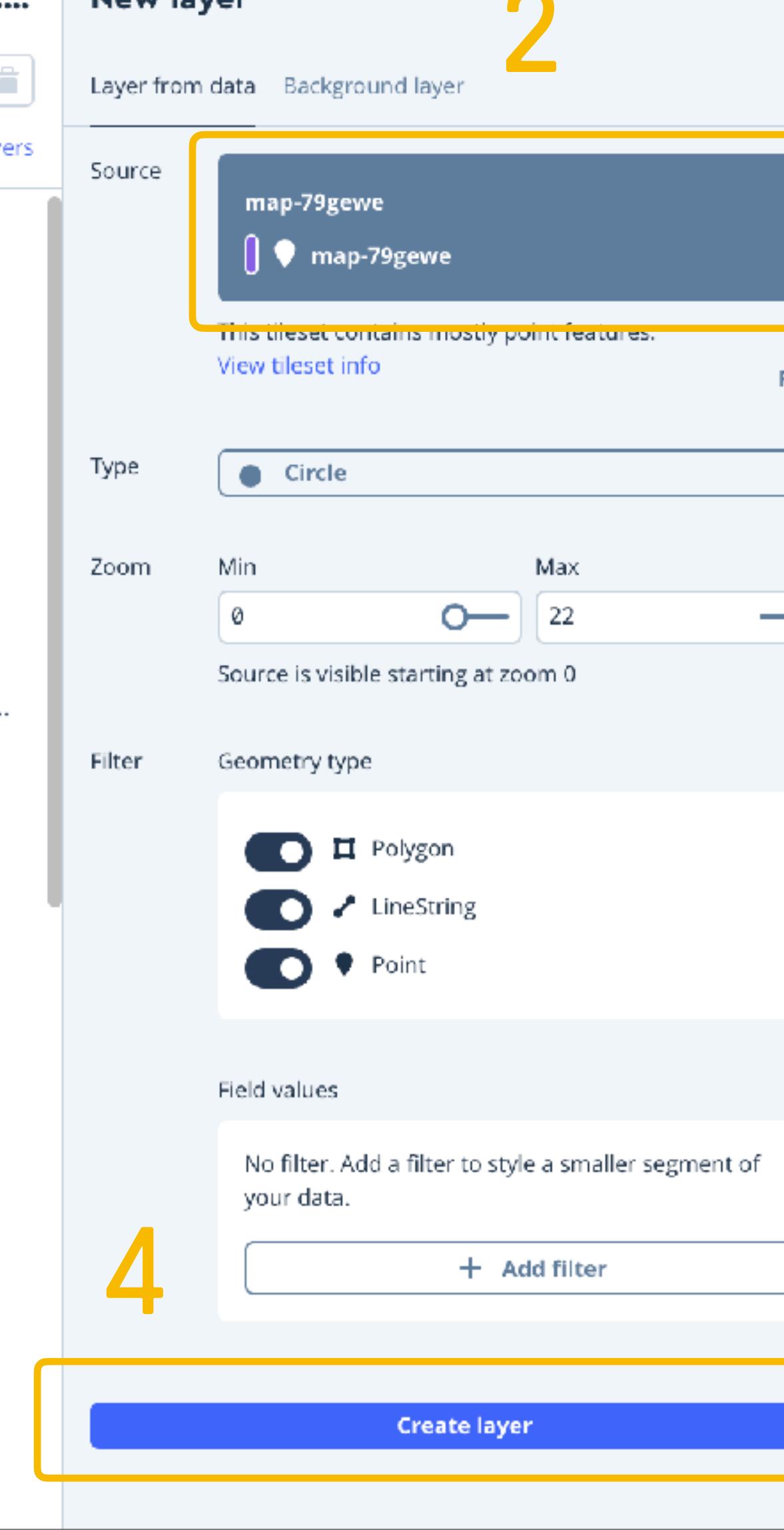
Get Studio Preview for iOS or Android to view your styles on mobile devices.

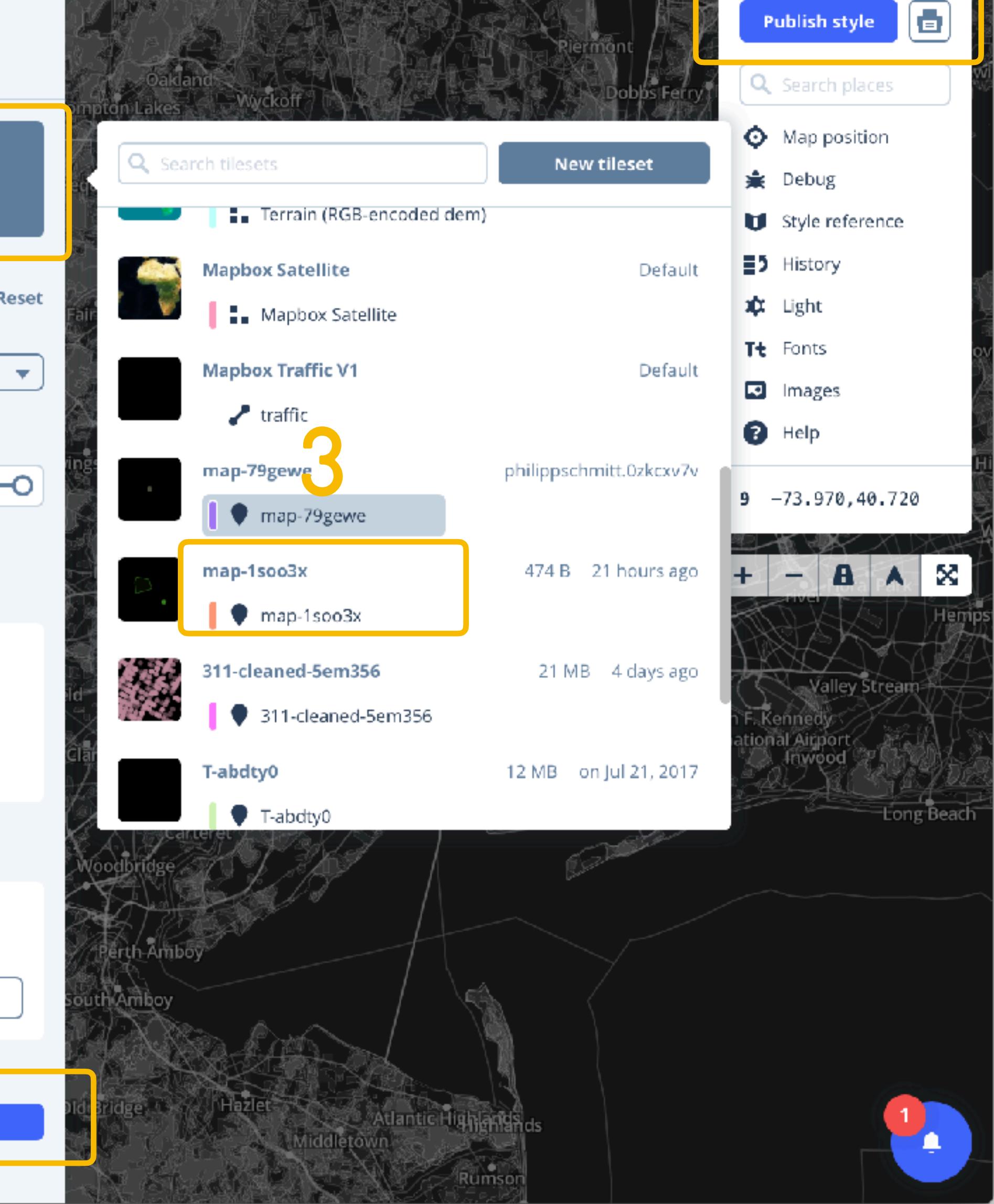
Try Cartogram to instantly make a map from a photo.

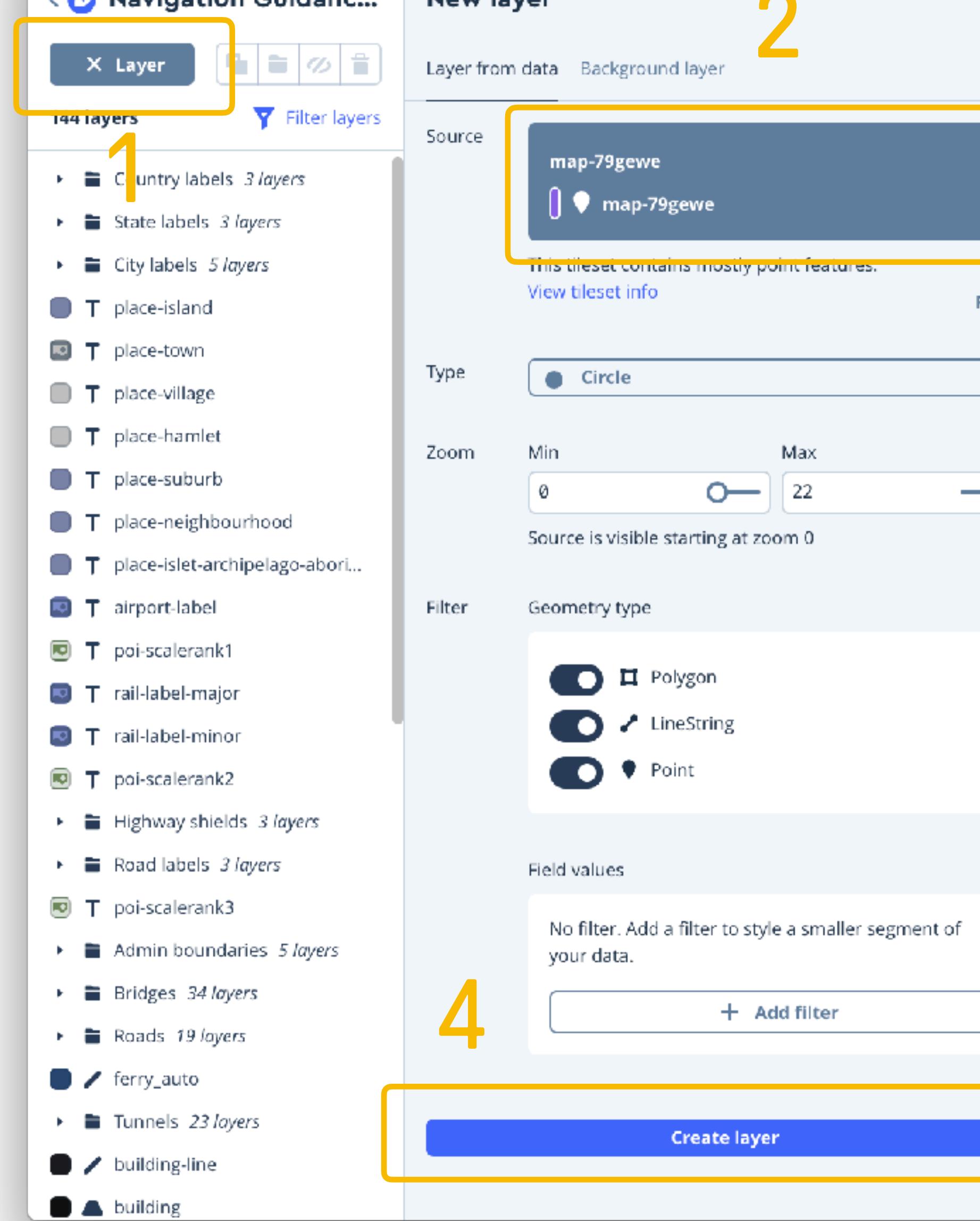
Visit our blog to learn about the latest from Mapbox.

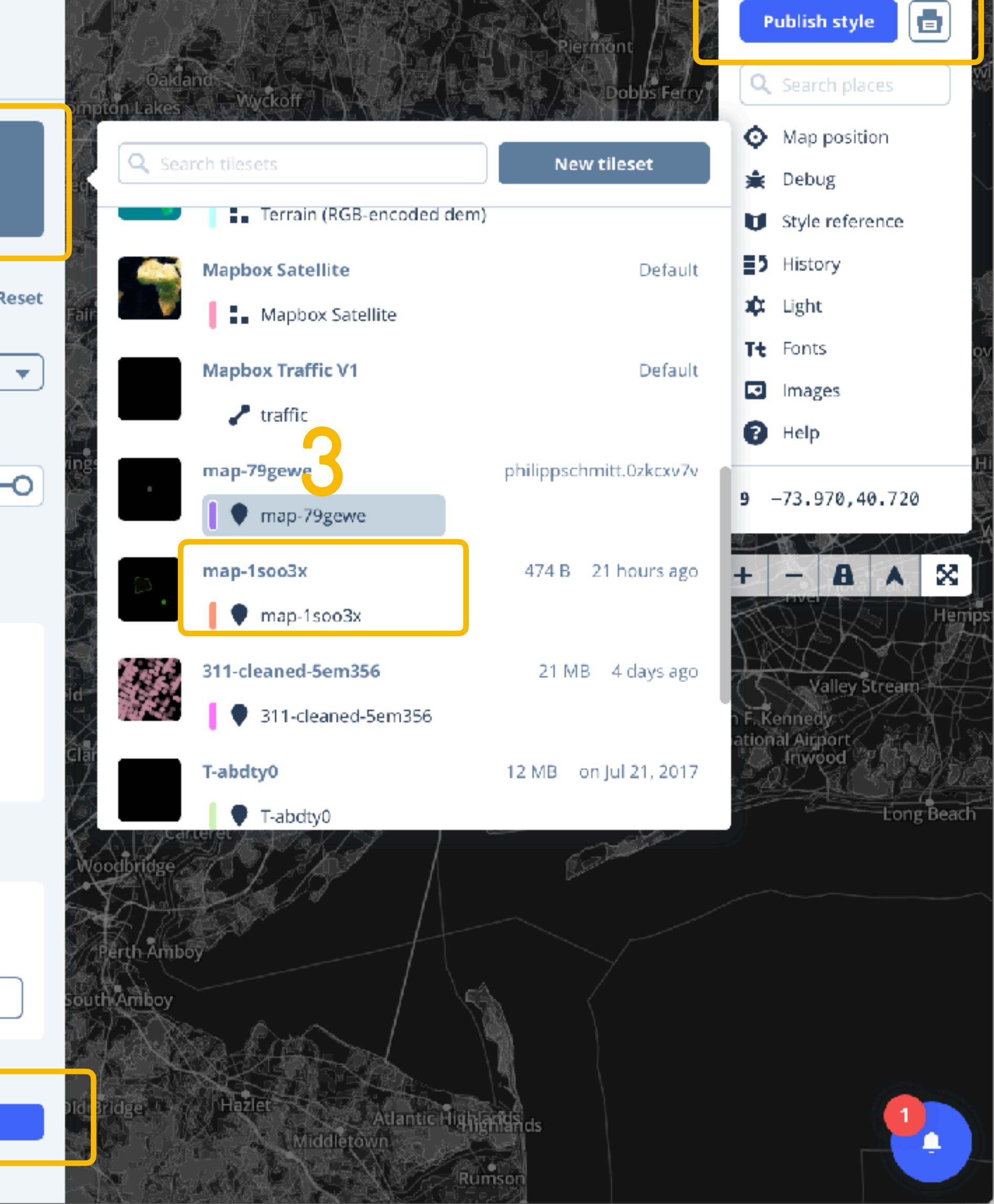
1

1 

2 

3 

4 

5 

The screenshot shows the Mapbox Studio Styles page at www.mapbox.com/studio/styles/. The page has a navigation bar with 'Studio' (highlighted), 'Account', 'Home', 'Styles' (highlighted), 'Tilesets', and 'Datasets'. A search bar and sorting options ('Sort by Name Modified') are at the top. A 'New style' button is prominent. On the left, a list of 12 styles is shown, each with a thumbnail, name, and publish date. The first style, 'Navigation Guidance Night', has its 'Menu' button highlighted with a yellow box and a large yellow '1'. A context menu is open over this style, listing options: 'Share, develop & use', 'Download', 'Duplicate', 'Replace', 'Make public', 'Delete', and 'Revert to last publish'. The 'Style URL' field shows 'mapbox://styl...' with a 'Copy' button next to it, which is also highlighted with a yellow box and a large yellow '2'. A notification bell icon in the bottom right corner has a red circle with the number '1'.

1

2

Visualization with code

Where can I get some data to use?

Natural Earth

<http://www.naturalearthdata.com/>

US Census Bureau

<http://www.census.gov/geo/maps-data/data/tiger.html>

Geocommons

<http://geocommons.com/>

OpenStreetMap

<http://www.openstreetmap.org/>

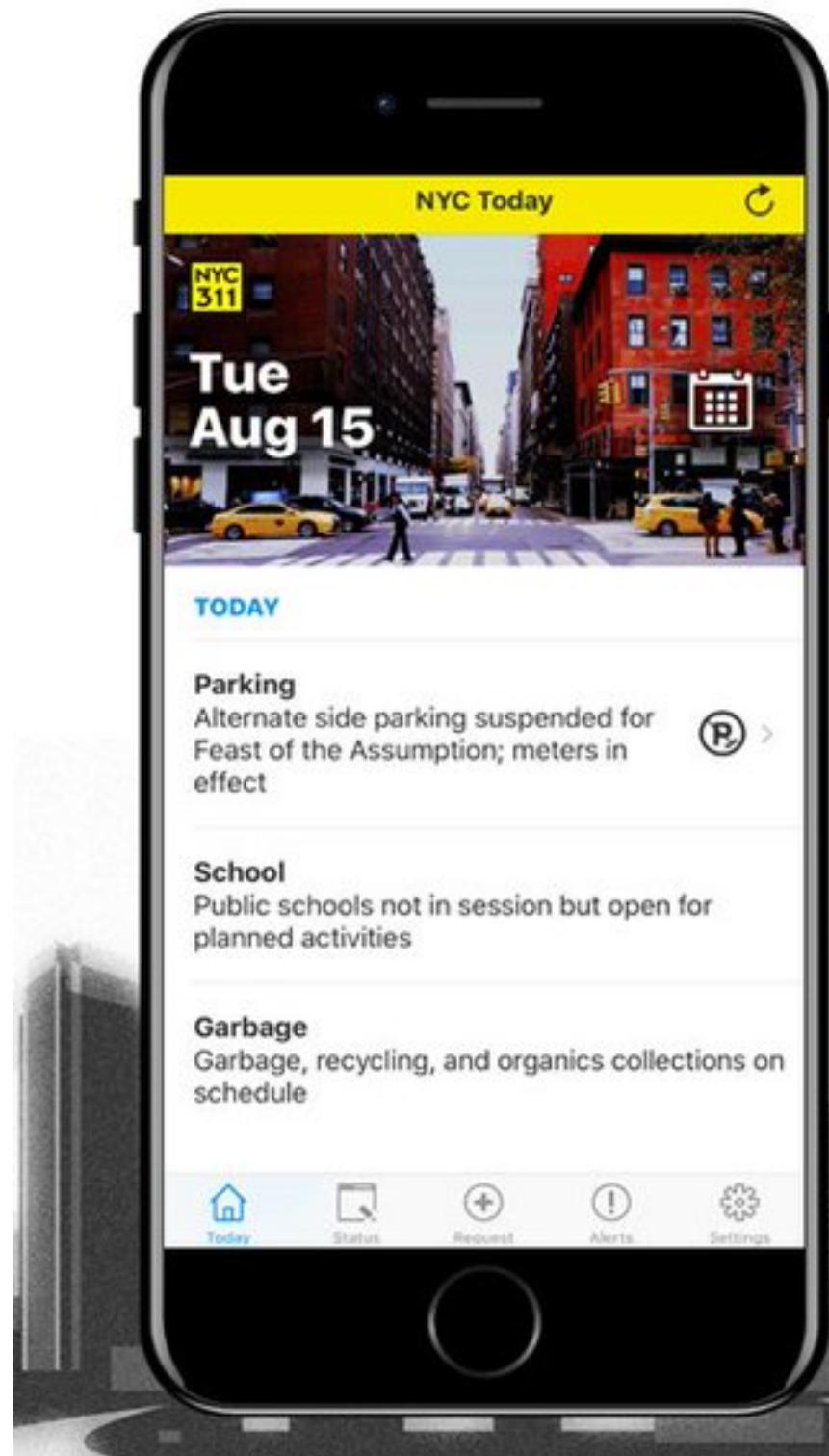
NYC Open Data

<https://nycopendata.socrata.com>

...

...

Introducing the new NYC 311 Mobile App



- A redesigned, more helpful 'NYC Today' page

- Automatic Service Request status updates

- All new Search Bar for Requests



<https://github.com/philippsschmitt/Dorkshop-Web-Maps>

Starting the webserver:

1. Open Terminal

2. `cd /folder/path`

(navigate to the folder where you saved the files from GitHub)

3. Type + hit enter: `python -m http.server 8000`

4. In your browser, open `http://localhost:8000`

<https://www.mapbox.com/mapbox-gl-js/api>

Happy mapping!