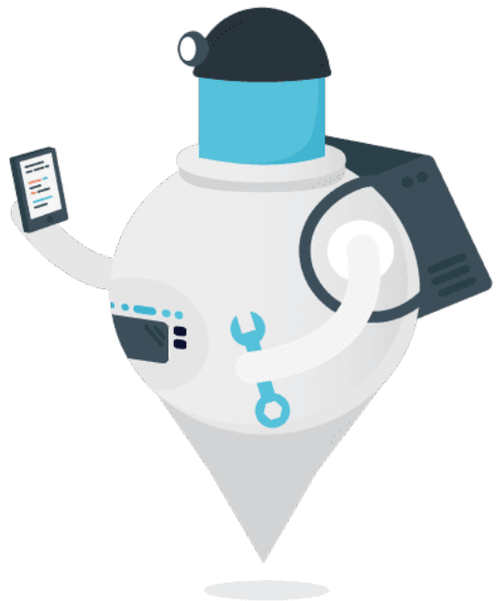
Designing and Publishing a Map Product with **Mapbox**

Lyzi Diamond, **Mapbox** | March 23, 2015

Who am I?
What is **Mapbox**?
What are we going to do today?



BEFORE WE START:

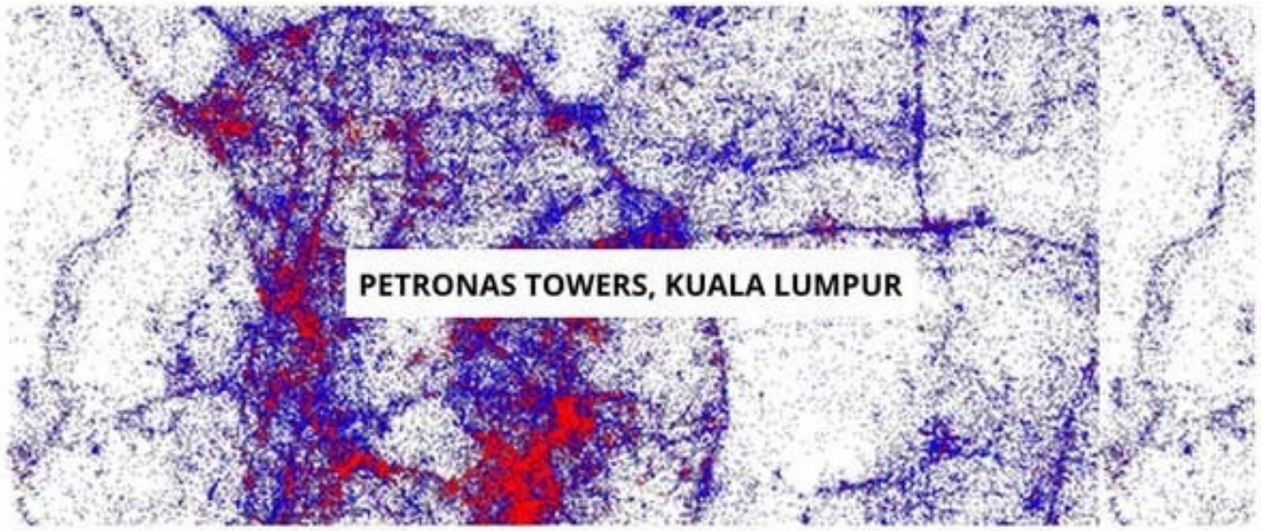
- Did you **register for an account** at www.mapbox.com?

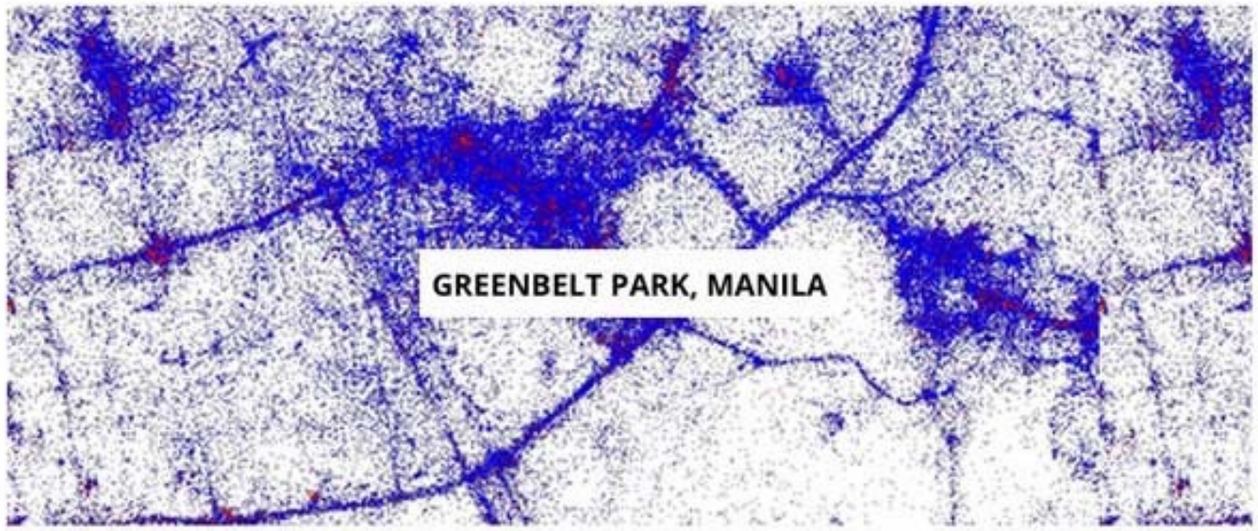
- Have you **downloaded Mapbox Studio**? www.mapbox.com/mapbox-studio

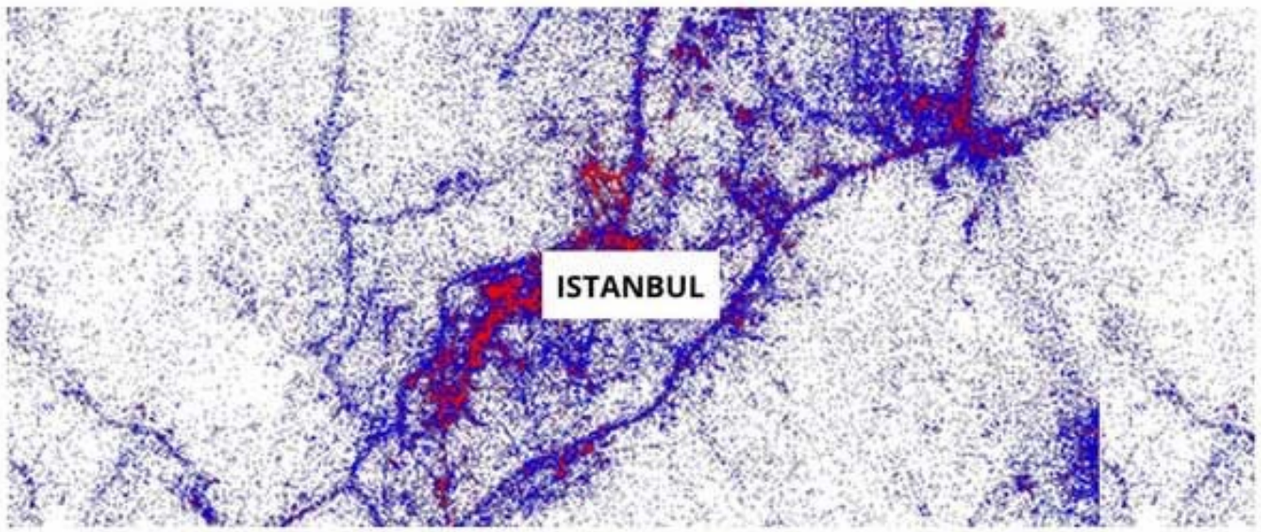
- Use the coupon code **MAPBOXFRIENDS03** to upgrade to a Standard account (free for three months!) at www.mapbox.com/plans

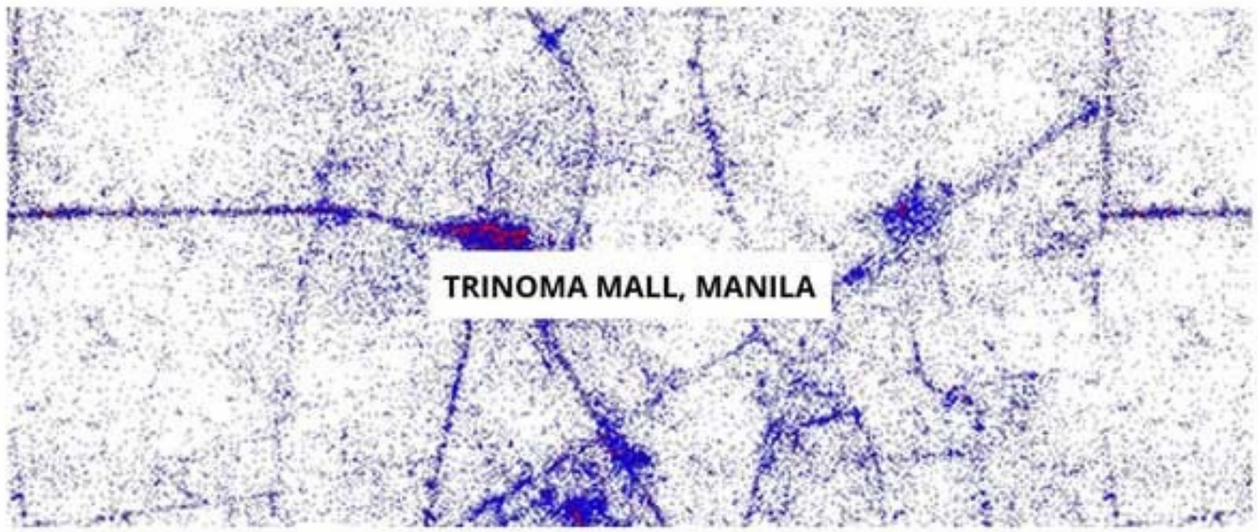
Mapbox

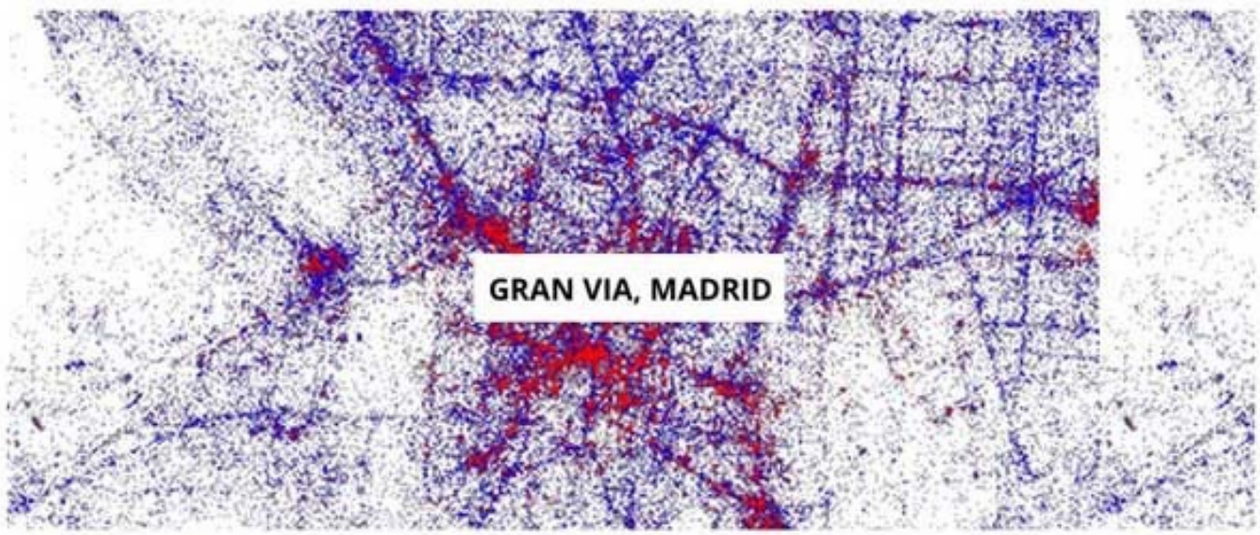
We build developer tools
for making awesome maps.

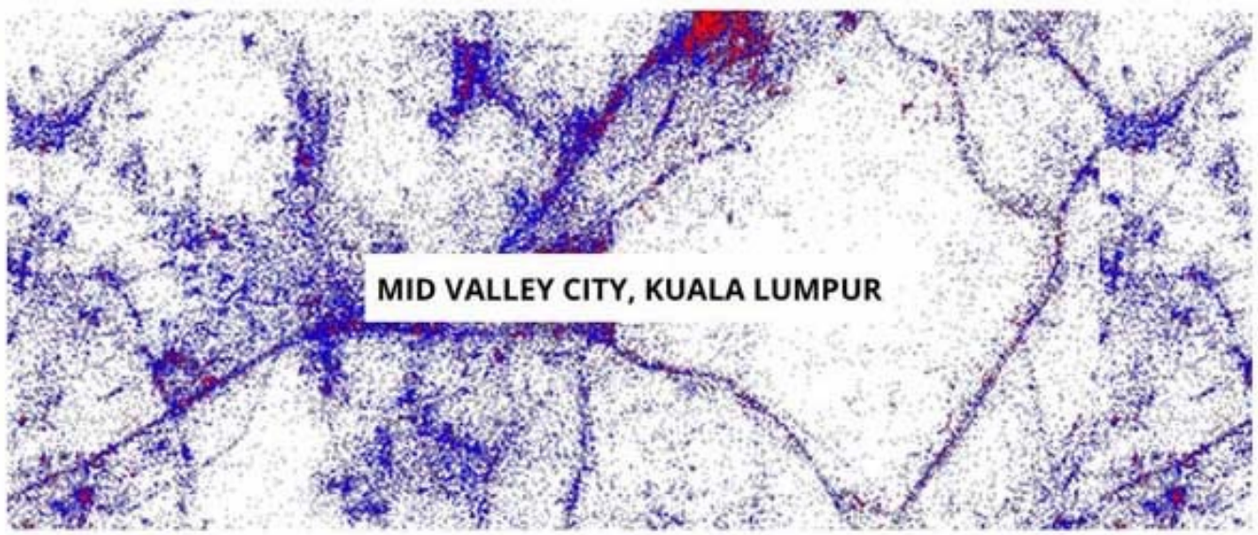

PETRONAS TOWERS, KUALA LUMPUR


GREENBELT PARK, MANILA

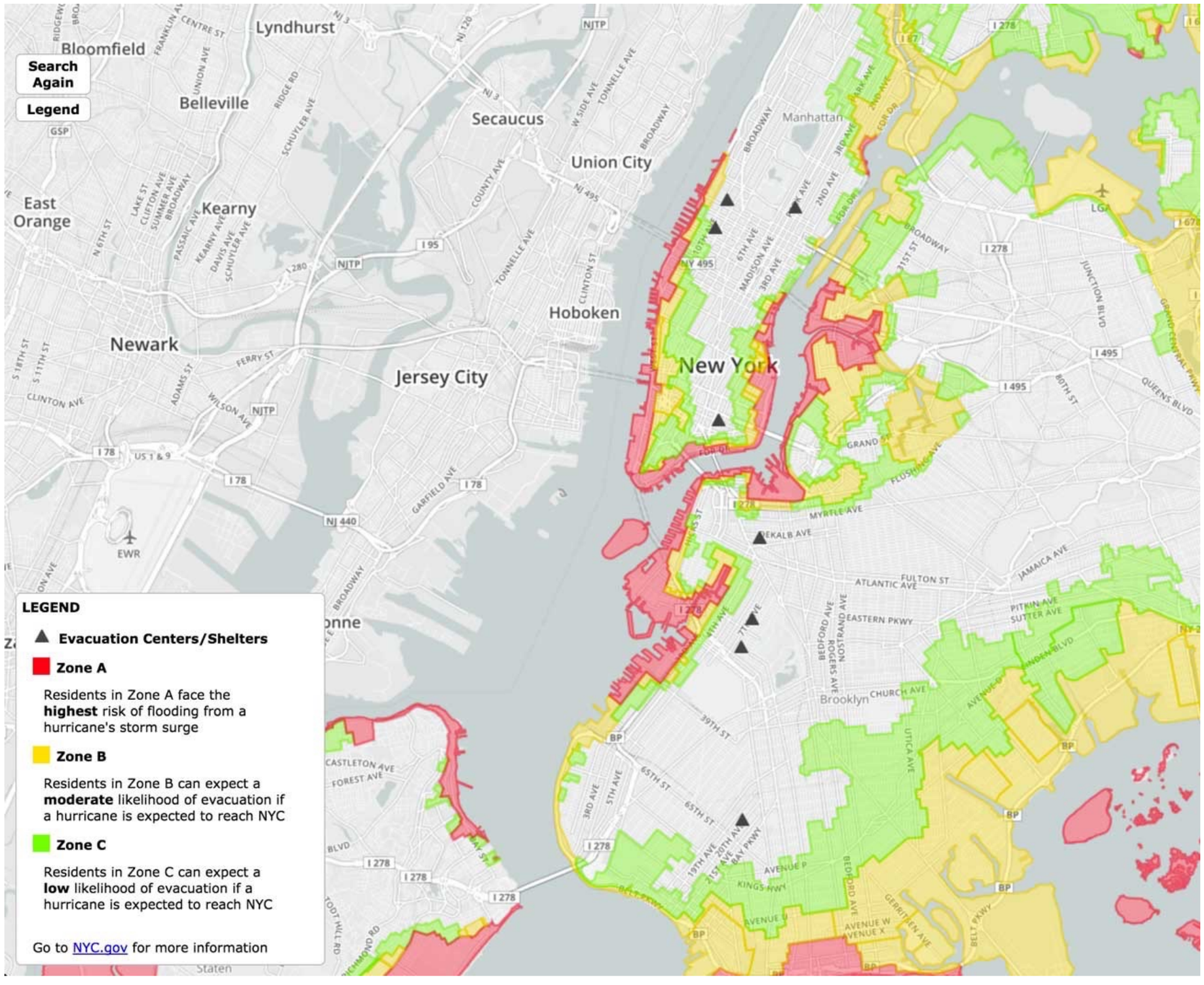

ISTANBUL


TRINOMA MALL, MANILA


GRAN VIA, MADRID


MID VALLEY CITY, KUALA LUMPUR

www.mapbox.com/industries/agriculture



www.mapbox.com/nyc-sandy

PUBLIC smartchicago / chicago-atlas

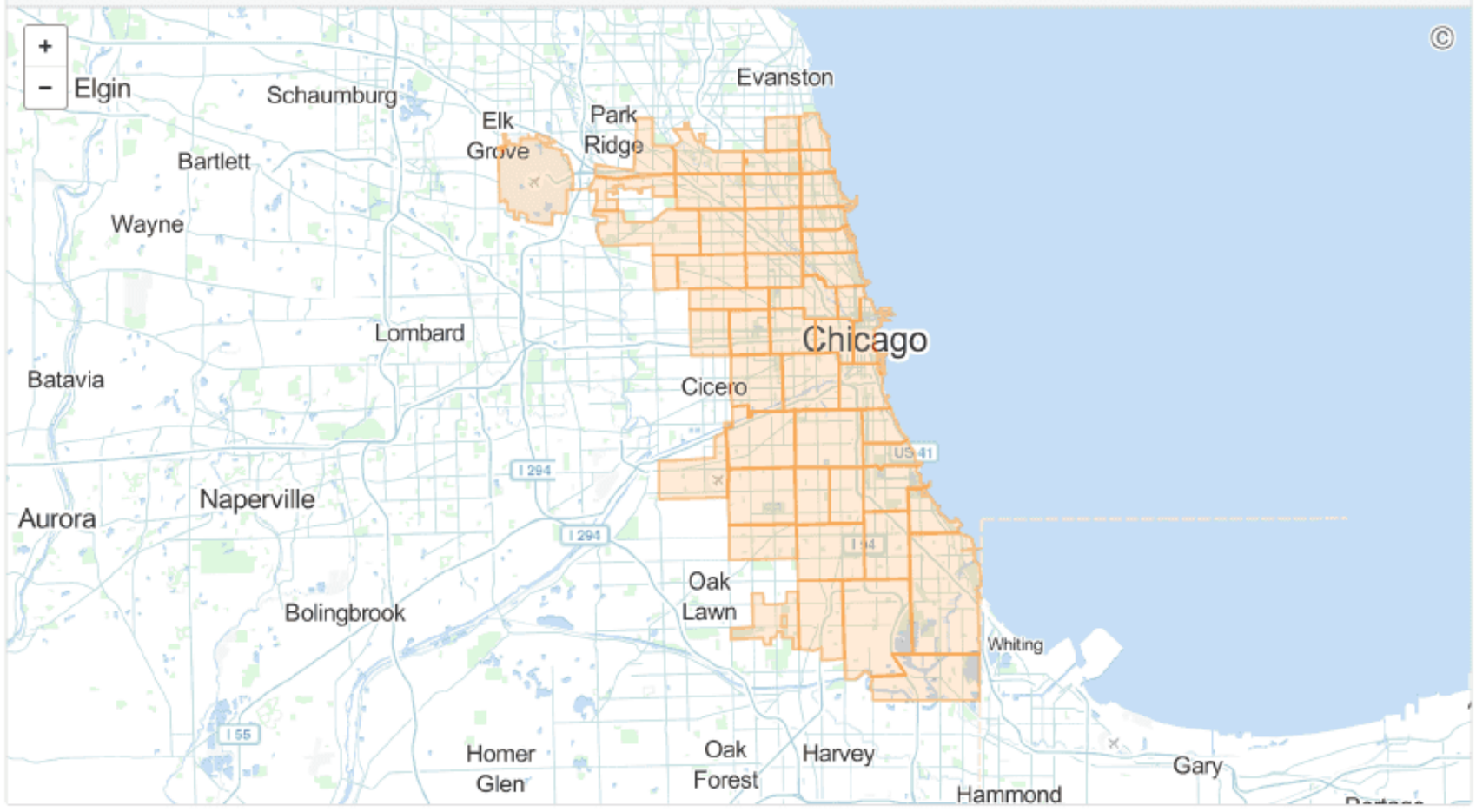
Watch 20 | Star 72 | Fork 233

branch: master **chicago-atlas** / db / import / **zipcodes.geojson**

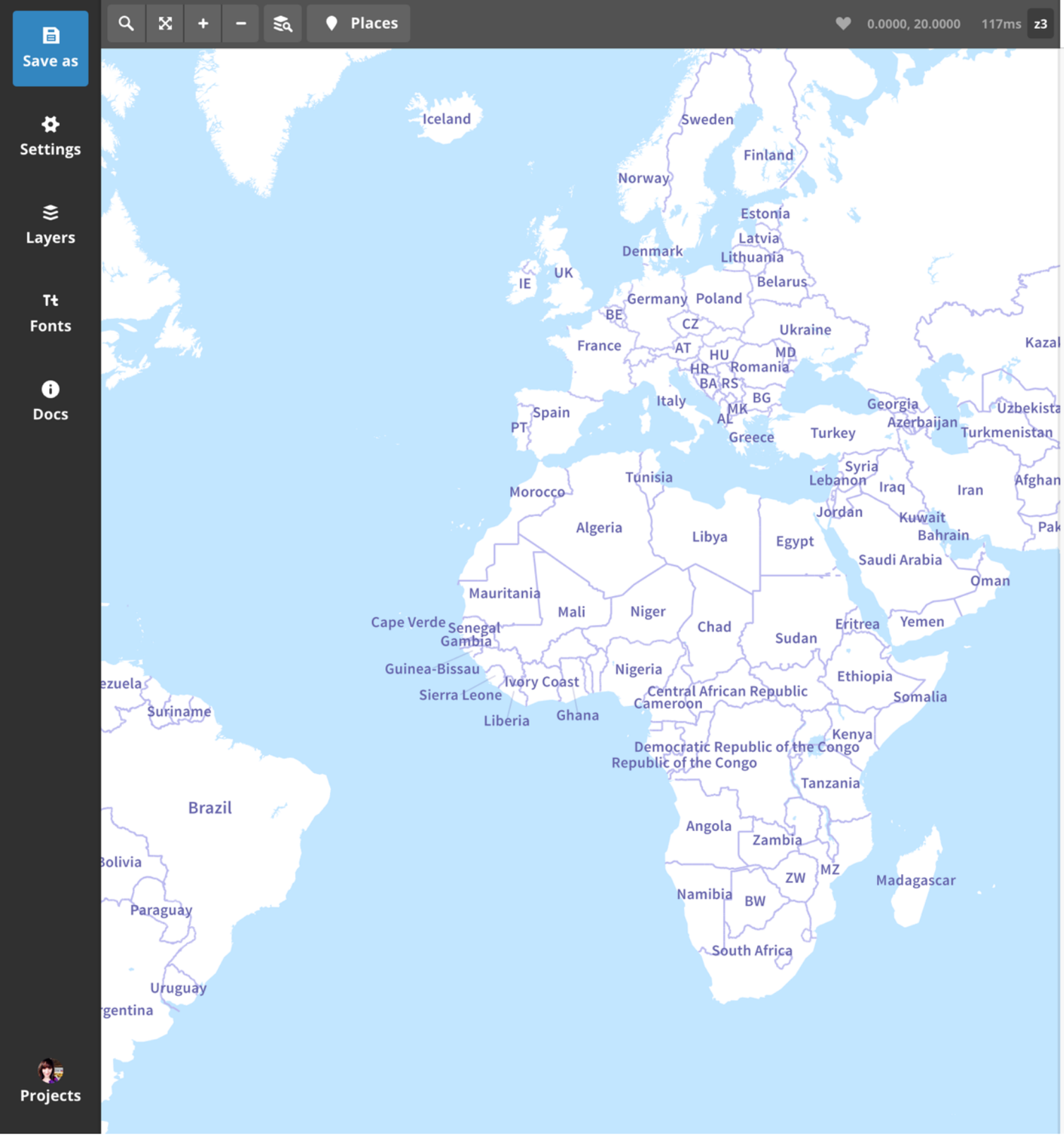
derekeder on May 1 merged 60633 in to 60827, closes #175

3 contributors

file | 7182 lines (7182 sloc) | 254.318 kb | Open | Edit | Raw | Blame | History | Delete



Mapbox Satellite




```
1  // Languages: name (local), name_en, name_fr, name_es, name_de
2  @name: '[name_en]';
3
4  // Fonts //
5  @sans: 'Source Sans Pro Regular';
6  @sans_italic: 'Source Sans Pro Italic';
7  @sans_bold: 'Source Sans Pro Semibold';
8
9  // Common Colors //
10 @land: #fff;
11 @water: #c3e6ff;
12
13 Map { background-color: @land; }
14
15 // Political boundaries //
16
17 #admin[admin_level=2][maritime=0] {
18   line-join: round;
19   line-color: #bbe;
20   line-width: 1.4;
21   [zoom>=6] { line-width: 2; }
22   [zoom>=8] { line-width: 4; }
23   [disputed=1] { line-dasharray: 4,4; }
24 }
25
26 // Places //
27
28 #country_label[zoom>=3] {
29   text-name: @name;
30   text-face-name: @sans_bold;
31   text-fill: #66a;
32   text-size: 12;
33   [zoom>=3][scalerank=1],
34   [zoom>=4][scalerank=2],
35   [zoom>=5][scalerank=3],
36   [zoom>=6][scalerank>3] {
37     text-size: 14;
38   }
39   [zoom>=4][scalerank=1],
40   [zoom>=5][scalerank=2],
41   [zoom>=6][scalerank=3],
42   [zoom>=7][scalerank>3] {
43     text-size: 16;
```

Mapbox Studio

JavaScript
Mapbox.js library

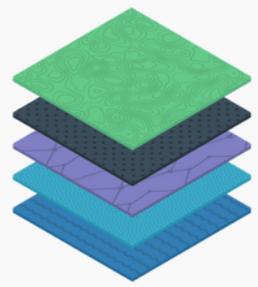
iOS
Mapbox iOS SDK & MBXMapKit

Android
Android SDK

Mapbox GL
JS and Native

Mapbox Studio

Web services
Cross-platform



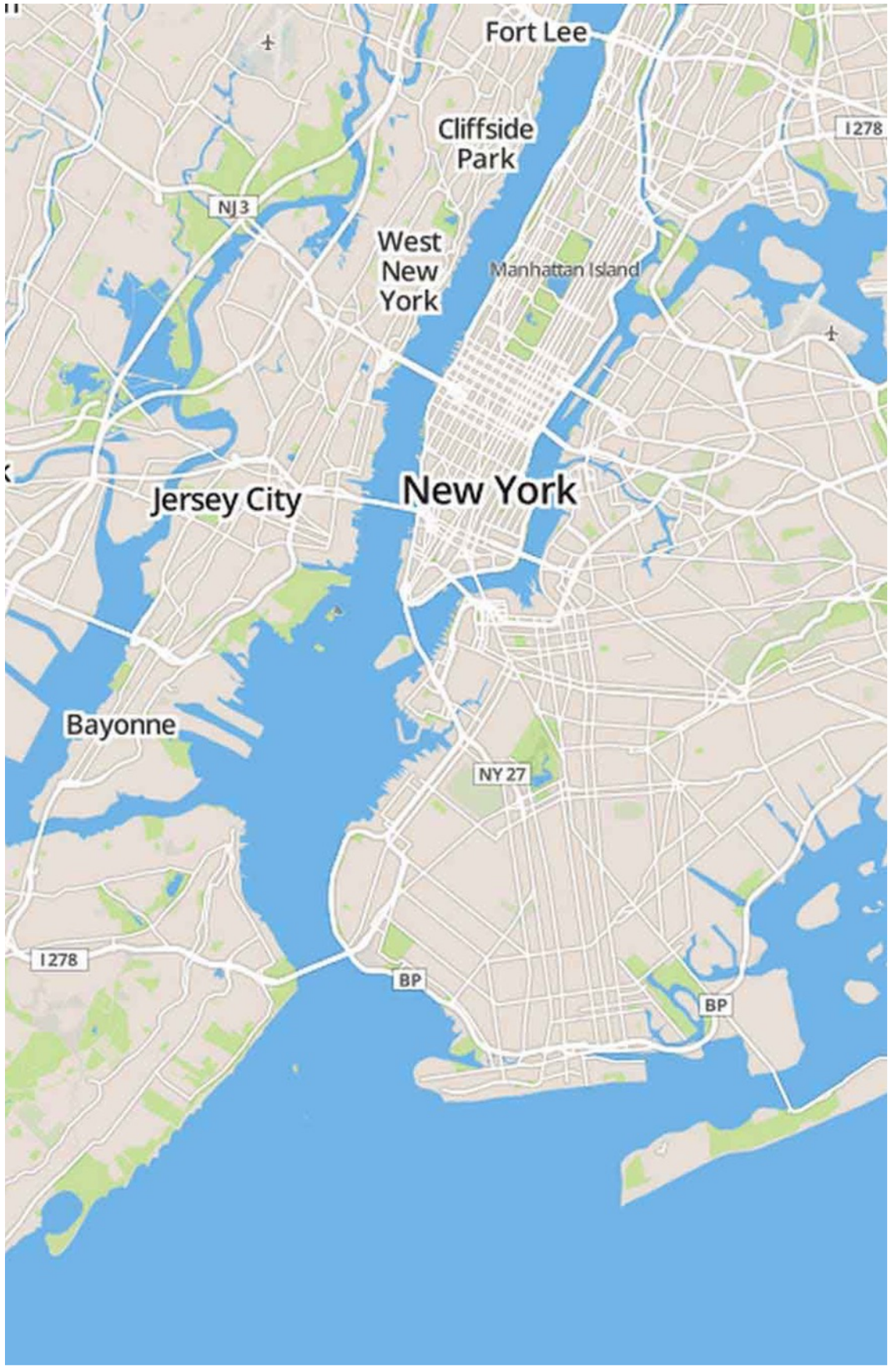
www.mapbox.com/developers

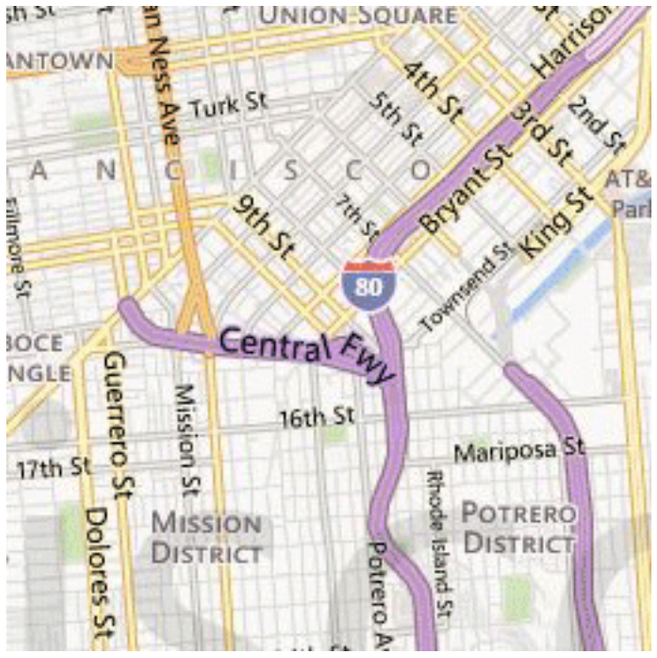
Today we will:

- Learn about vector tiles
- Get our hands dirty with Mapbox Studio
- Customize a basemap
- Upload it to mapbox.com
- Put it on a web page

First things first:

Let’s talk about **vector tiles**!





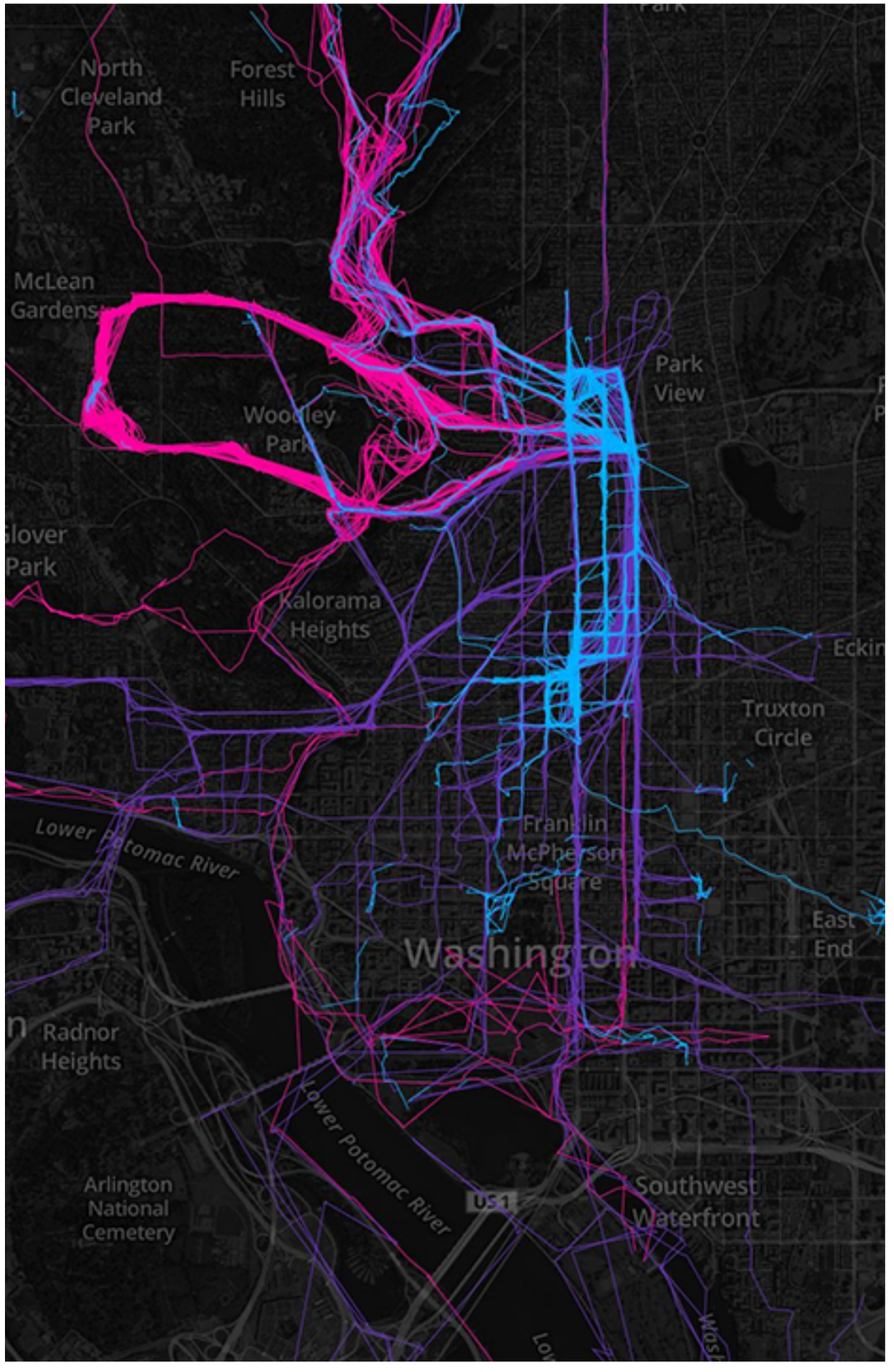
Before vector tiles, there were raster tiles.

Raster tiles are PNGs that are rendered on the server and then served to the client upon request.

With raster tiles:

- Use vector data layers
- Style the data with a styling language called **CartoCSS**
- Export data and style to a renderer that creates tiles and stores them in a specific file structure
- Load tiles when they're requested from the client

So how does this process differ from vector tiles?



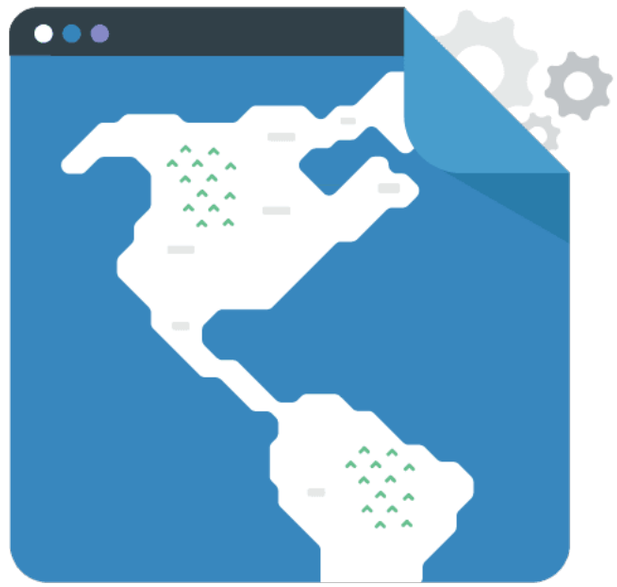
With vector tiles:

- Use vector data layers
- Style the data with a styling language called **CartoCSS**
- Style and source (vector) data stored separately - renderer only renders vector data
- Load vector data when requested by client
- Style is added in the browser!

Raster tiles only include the image, but vector tiles include all the vector data.

The style determines what is shown on the tile.

Vector tiles are fast and dynamic.

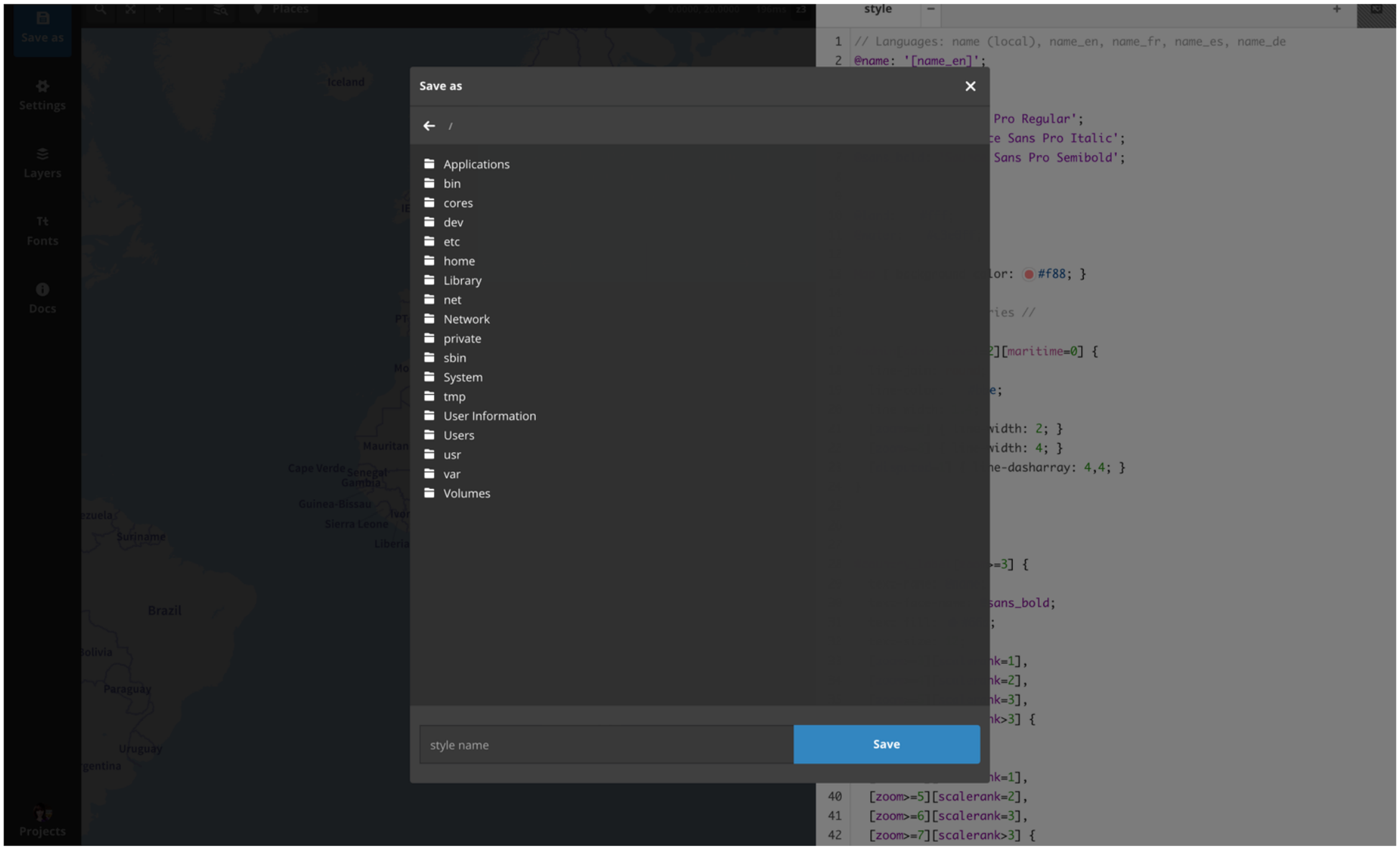


So let's make some!

Go ahead and open up **Mapbox Studio**.

“Holy carps, that’s a lot of things!”

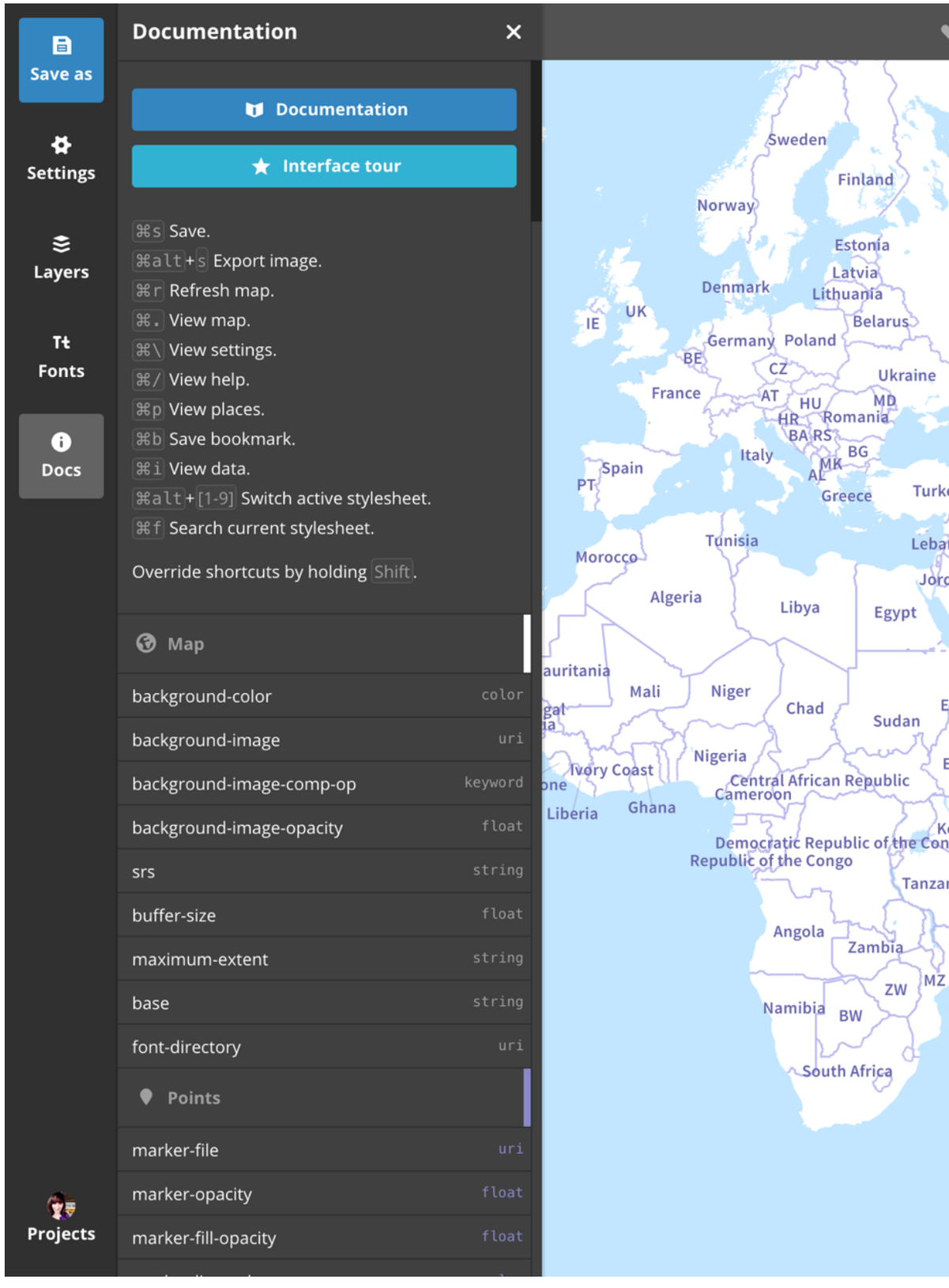
– Me, the first time I opened Mapbox Studio



Save save save FIRST

If we don’t save it, we won’t be able to use it later.

In the left column, click **Docs** and then click **Interface Tour**.



style

```
// Languages: name (local), name_en, name_fr, name_es, name_de
@name: '[name_en]';

// Fonts //
@sans: 'Source Sans Pro Regular';
@sans_italic: 'Source Sans Pro Italic';
@sans_bold: 'Source Sans Pro Semibold';

// Common Colors //
@land: #fff;
@water: #c3e6ff;

Map { background-color: @land; }

// Political boundaries //

#admin[admin_level=2][maritime=0] {
  line-join: round;
  line-color: #bbe;
  line-width: 1.4;
  [zoom>=6] { line-width: 2; }
  [zoom>=8] { line-width: 4; }
  [disputed=1] { line-dasharray: 4,4; }
}

// Places //

#country_label[zoom>=3] {
  text-name: @name;
  text-face-name: @sans_bold;
  text-fill: #66a;
  text-size: 12;
  [zoom>=3][scalerank=1],
  [zoom>=4][scalerank=2],
  [zoom>=5][scalerank=3],
  [zoom>=6][scalerank>3] {
    text-size: 14;
  }
  [zoom>=4][scalerank=1],
  [zoom>=5][scalerank=2],
  [zoom>=6][scalerank=3],
  [zoom>=7][scalerank>3] {
    text-size: 16;
```

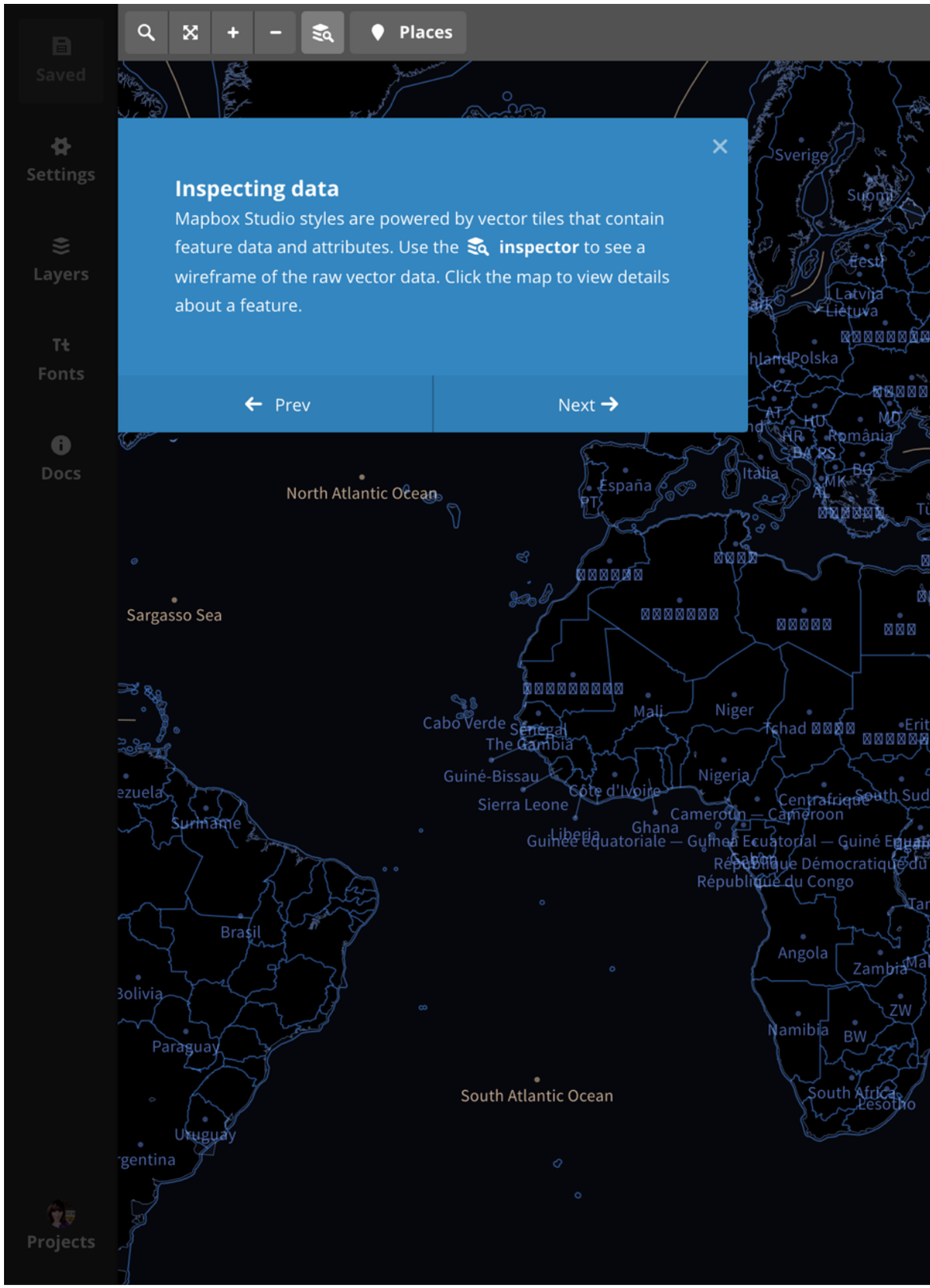
Style Editor

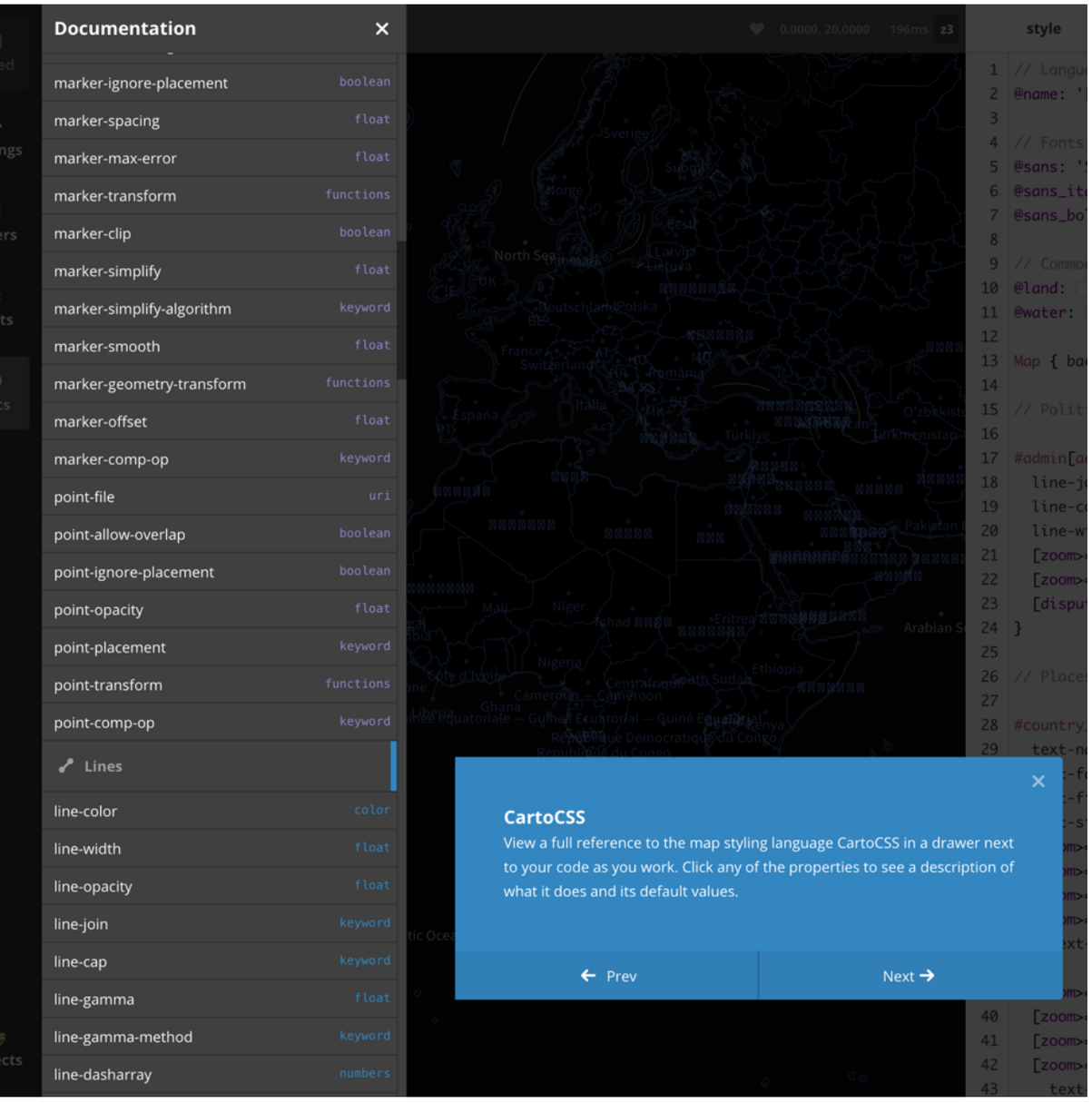
This is what we're going to be using today.

Mapbox Studio comes pre-loaded with data from OpenStreetMap and Natural Earth!

This is the vector tile data

that will power our styling today. It's cool to see what's available, and it's especially cool that we don't have to deal with data wrangling!



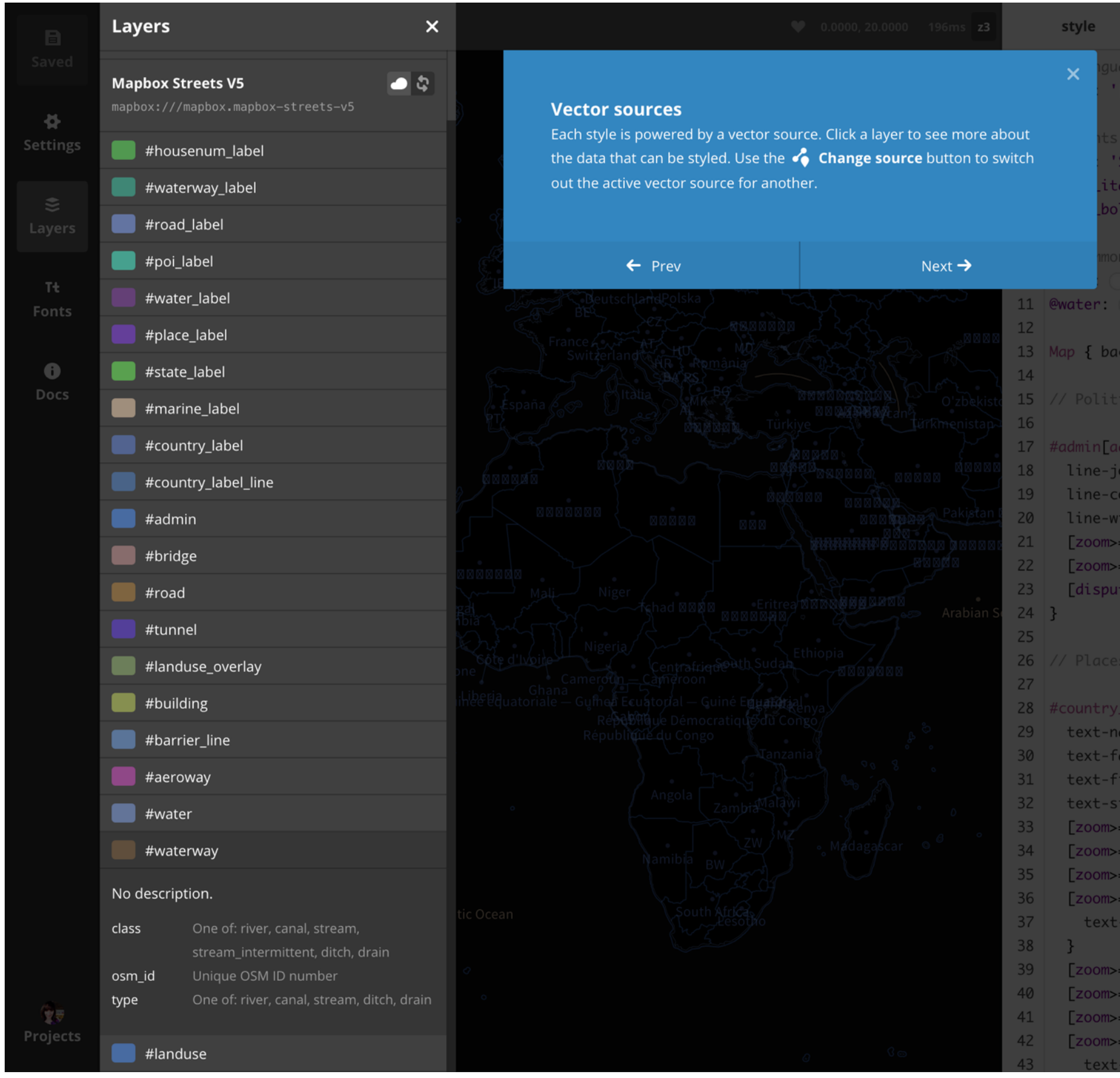


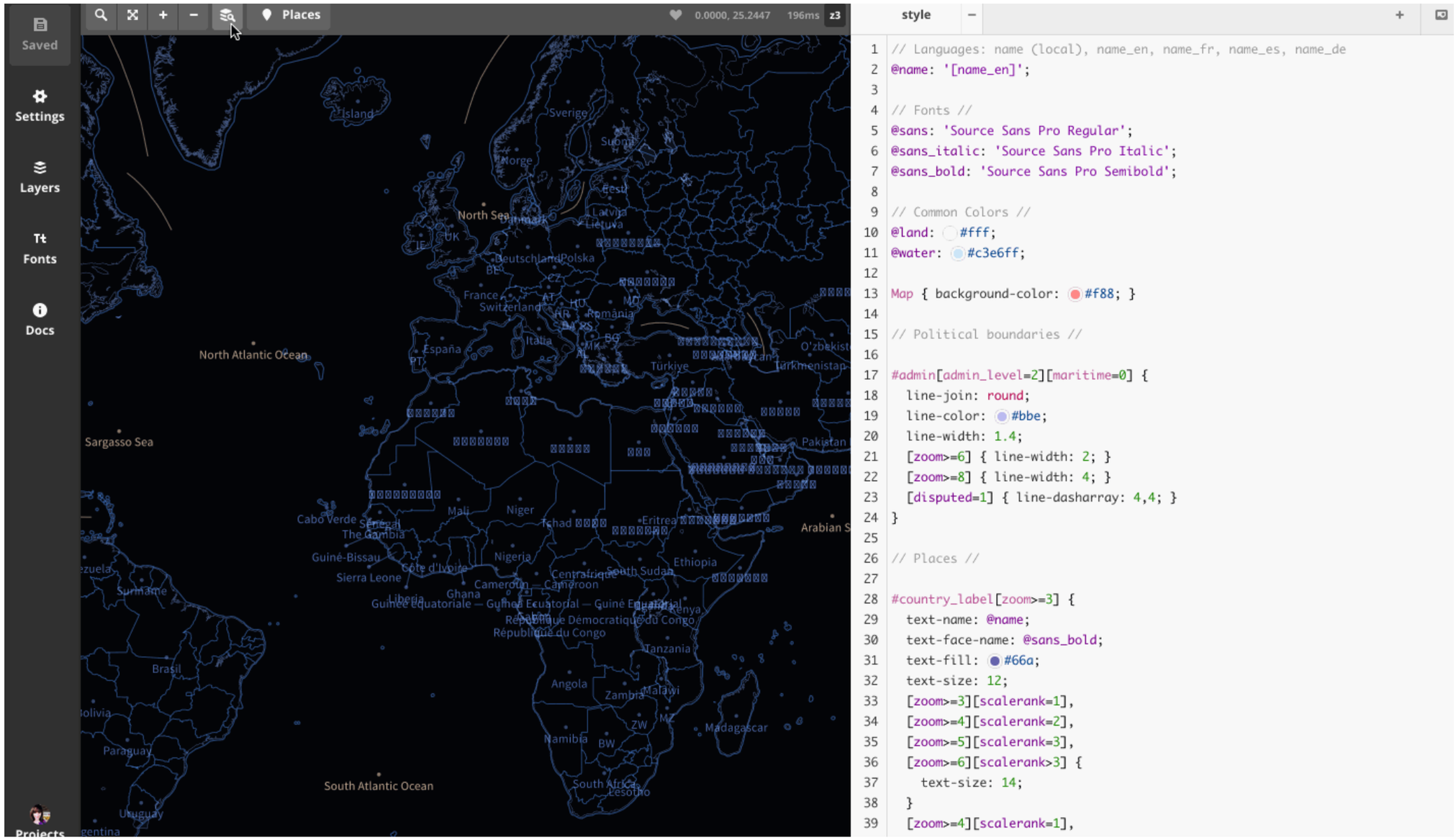
CartoCSS is the language of tile styling

and Mapbox Studio provides a full reference that's at our fingertips. We also have access to fonts!

Vector sources tell us how to write our CartoCSS

and since this data is from OpenStreetMap we will use the different feature tags for styling.





When you're done with the tour

click the inspector button to go back to style view.

Let’s walk through the CartoCSS and take a look at how this whole styling thing works.

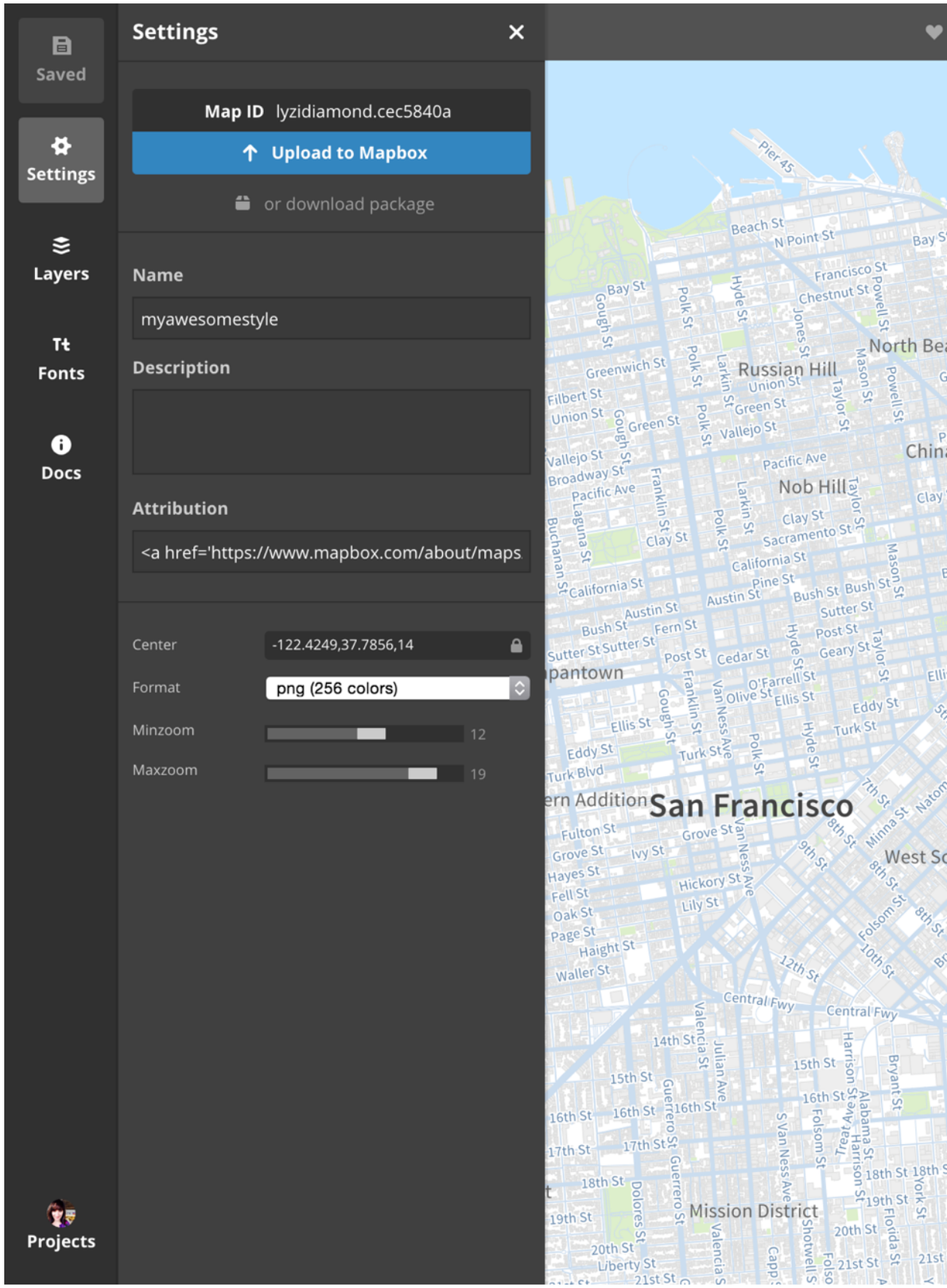
style

```
// Languages: name (local), name_en, name_fr, name_es, name_de
@name: '[name_en]';

// Fonts //
@sans: 'Source Sans Pro Regular';
@sans_italic: 'Source Sans Pro Italic';
@sans_bold: 'Source Sans Pro Semibold';

// Common Colors //
@land: #fff;
@water: #c3e6ff;

Map { background-color: #f88; }

// Political boundaries //

#admin[admin_level=2][maritime=0] {
  line-join: round;
  line-color: #bbe;
  line-width: 1.4;
  [zoom>=6] { line-width: 2; }
  [zoom>=8] { line-width: 4; }
  [disputed=1] { line-dasharray: 4,4; }
}

// Places //

#country_label[zoom>=3] {
  text-name: @name;
  text-face-name: @sans_bold;
  text-fill: #66a;
  text-size: 12;
  [zoom>=3][scalerank=1],
  [zoom>=4][scalerank=2],
  [zoom>=5][scalerank=3],
  [zoom>=6][scalerank>3] {
    text-size: 14;
  }
  [zoom>=4][scalerank=1],
  [zoom>=5][scalerank=2],
  [zoom>=6][scalerank=3]
```

[Lyzi opens Mapbox Studio and walks through it live, not succumbing to the curse of the live demo where things are inexplicably inoperable.]

We did it!

Super cool awesomesauce.
Click on the Map ID in
Mapbox Studio.



Styles

Uploads →

Filter your styles

1 results sorted by name date

lyzidiamond.cec5840a

`lyzidiamond.cec5840a` `2.2KB`

Mar 23 2015 Replace

Your style is alive!

You can look at metrics, see the map in its own page, and more!

Styles ?

Uploads →

Filter your styles

1 results sorted by name date

lyzidiamond.cec5840a

`lyzidiamond.cec5840a` `2.2KB`

Mar 23 2015 Replace

Zoom levels

z0 - z22

Description

No description

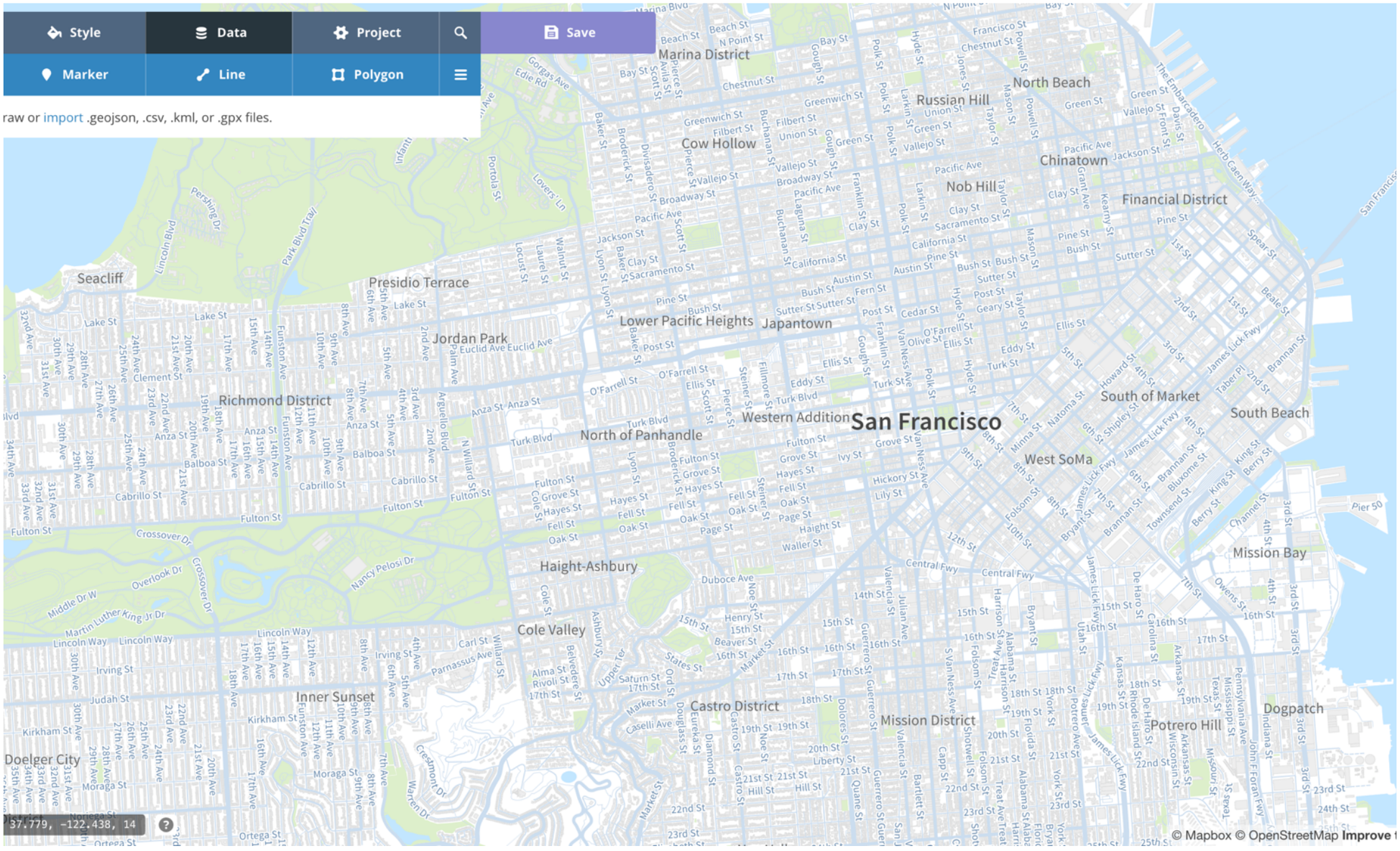
New project

Start with lyzidiamond.cec5840a as a layer in a new Editor project.

Visible to public API

Let’s make a new project.

Click on your style ID, then click New project.



Woohoo! Our style is on a map!

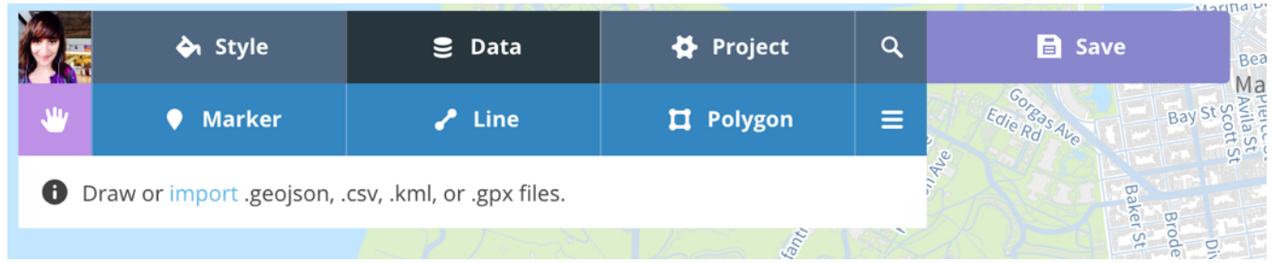
This is exciting because now we can add interactive data on top of our style and make something interesting.

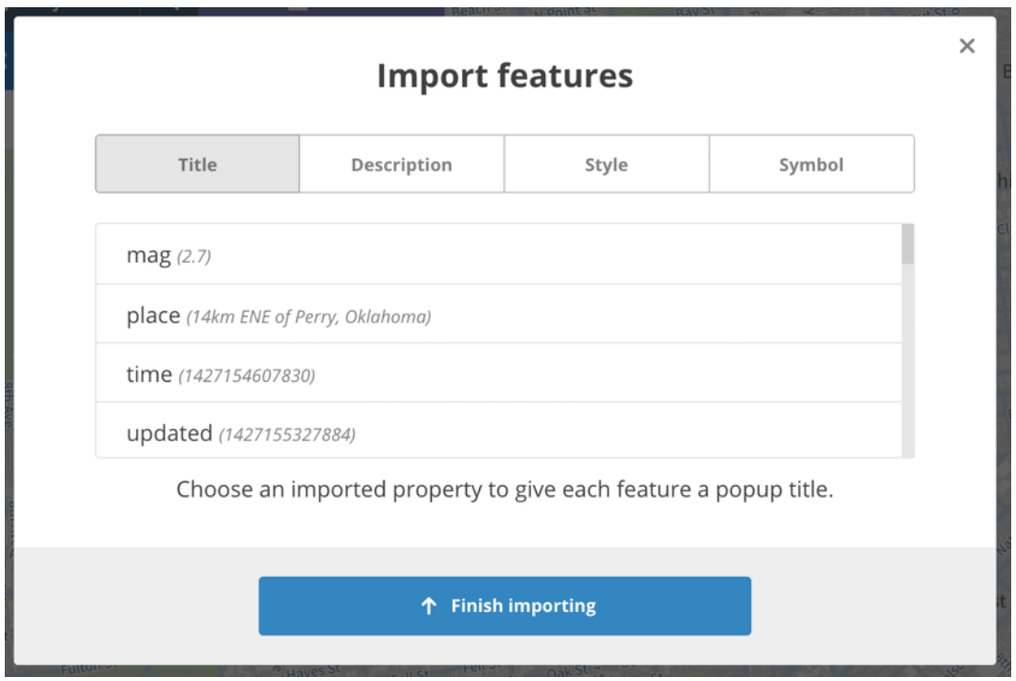
Past Day

Updated every minute.

Significant earthquakes	Atom	CSV	GeoJSON	GeoJSONP
M2.5+ earthquakes	Atom	CSV	GeoJSON	GeoJSONP
M1+ earthquakes	Atom	CSV	GeoJSON	GeoJSONP
All earthquakes	Atom	CSV	GeoJSON	GeoJSONP

- Head to bit.ly/earthquake-data
- Find and download the **GeoJSON** file of **Past Day M2.5+ Earthquakes**

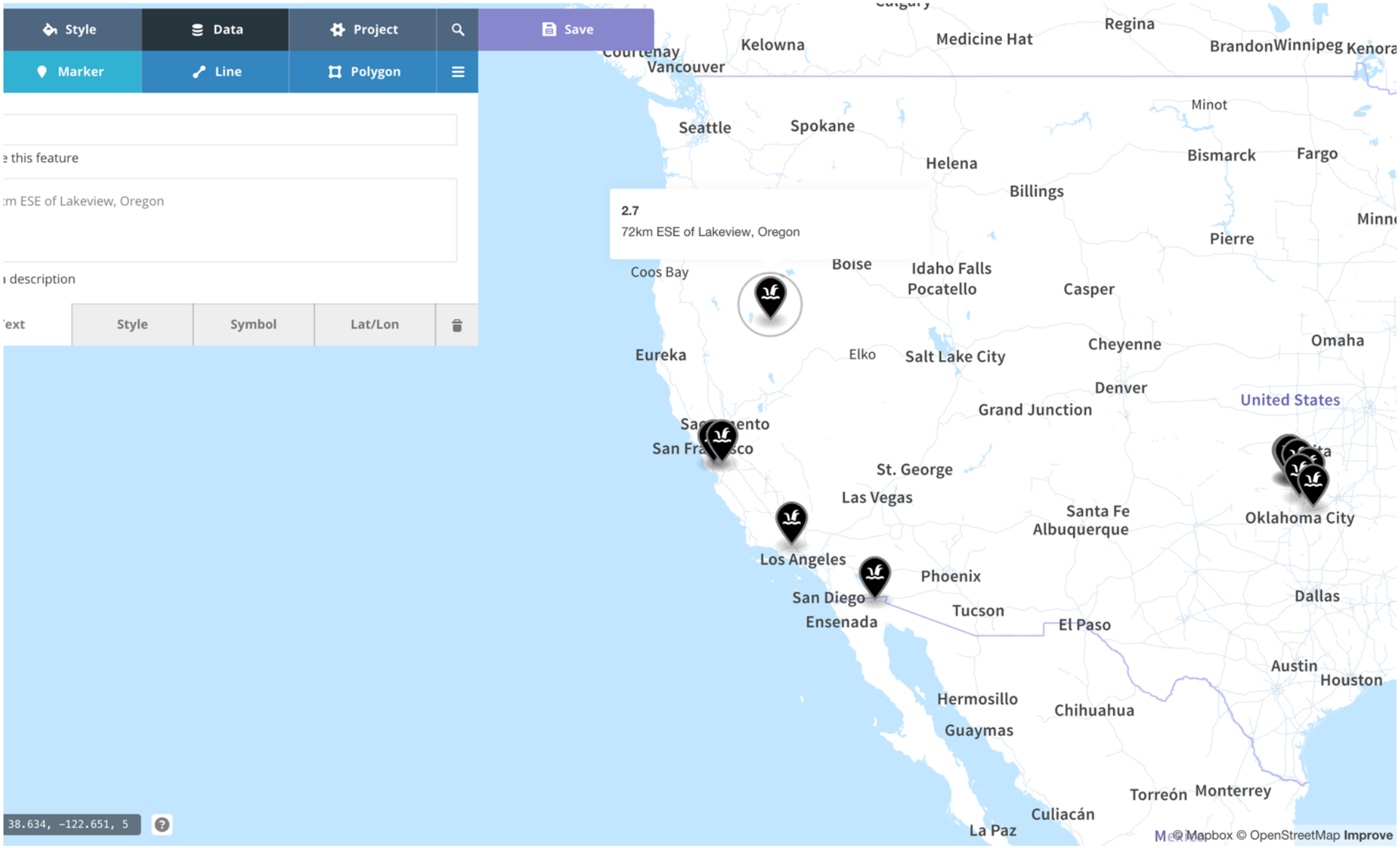




- Back on your mapbox.com project page, click **Data** and then click **import**

- Select the **2.5_day.geojson** file

- Select fields for a **popup title** and **popup description**, and then **style** the markers.

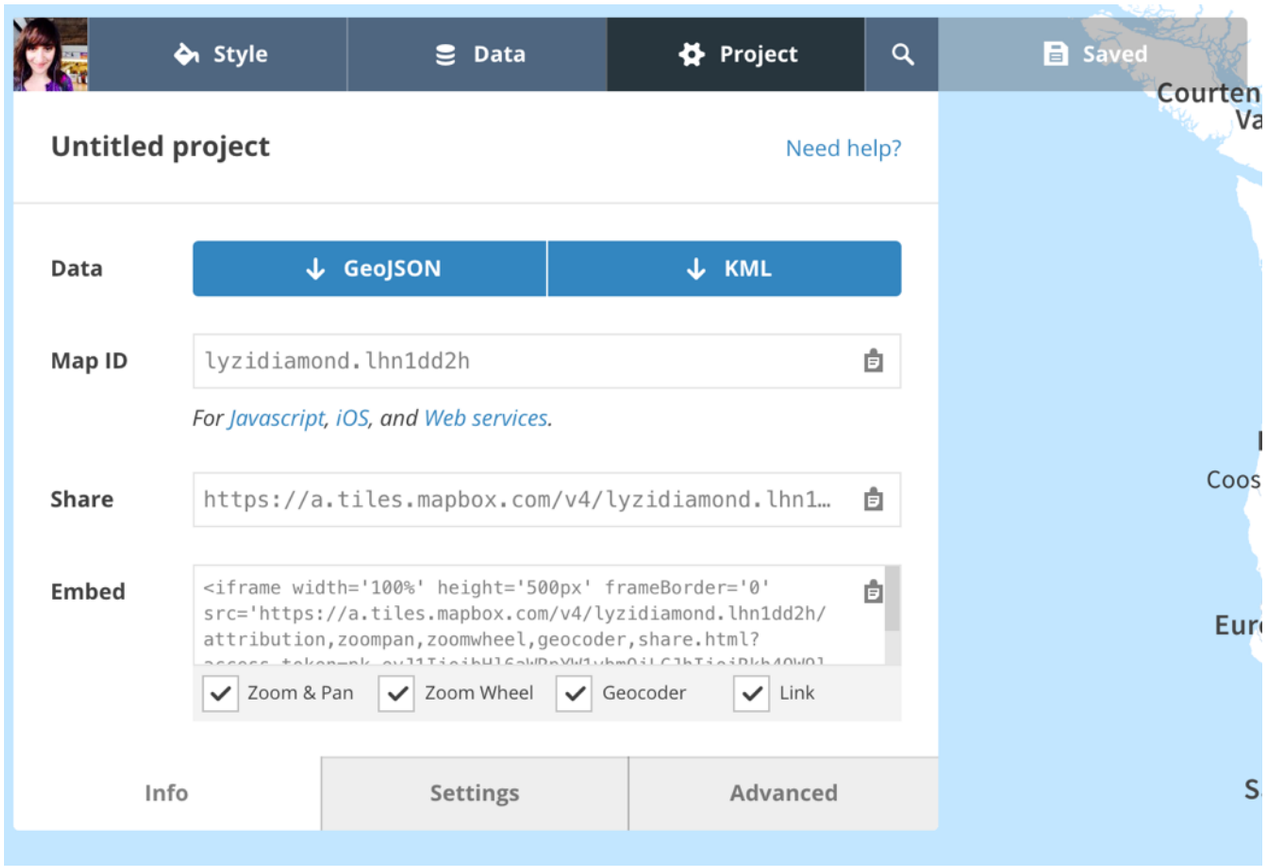


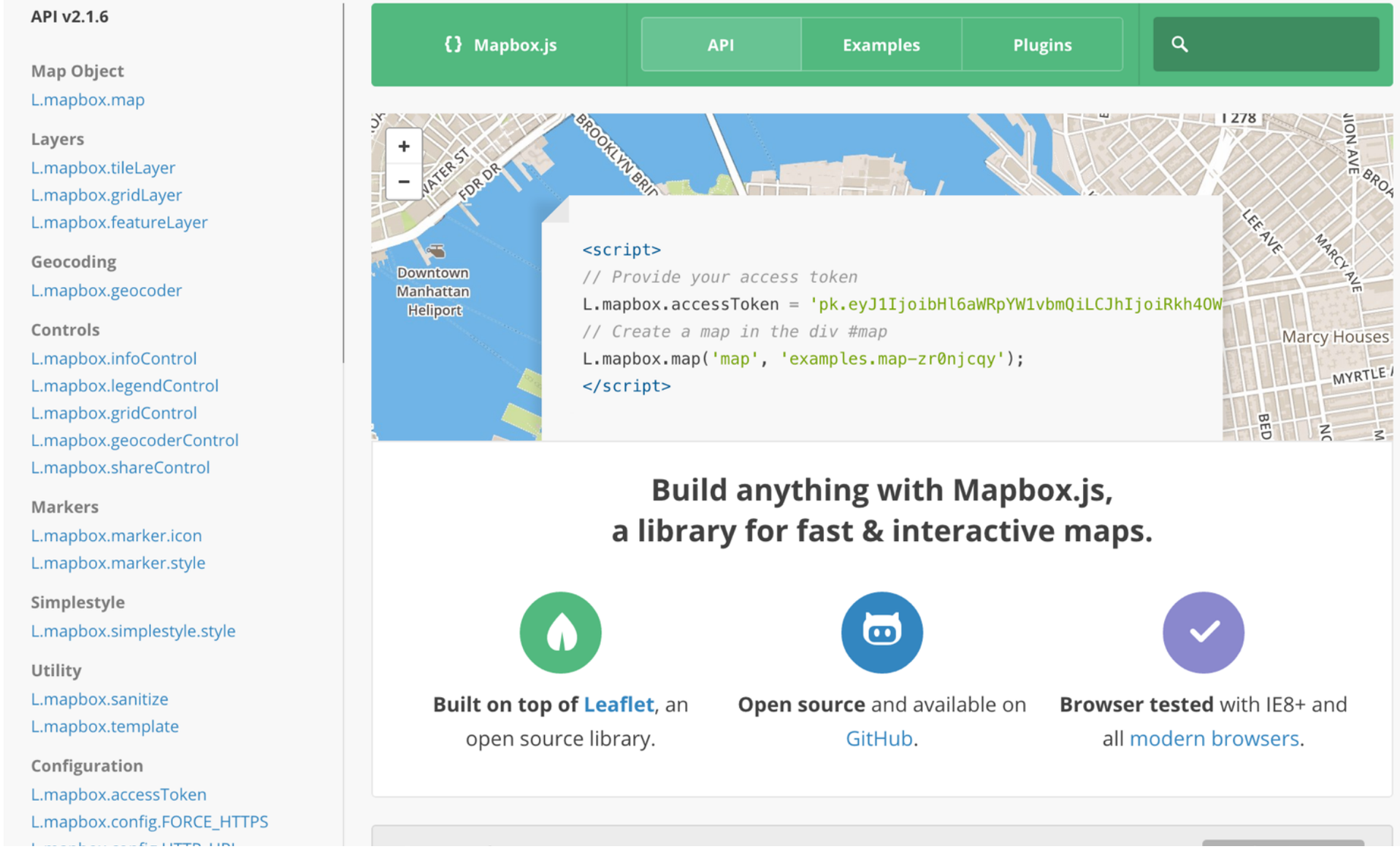
You made a map of earthquakes!

Click Save to save the project.

Now, under **Projects**, you have an embed code.

You can use this code to embed the map in other sites.





Also: **Mapbox.js**

www.mapbox.com/mapbox.js

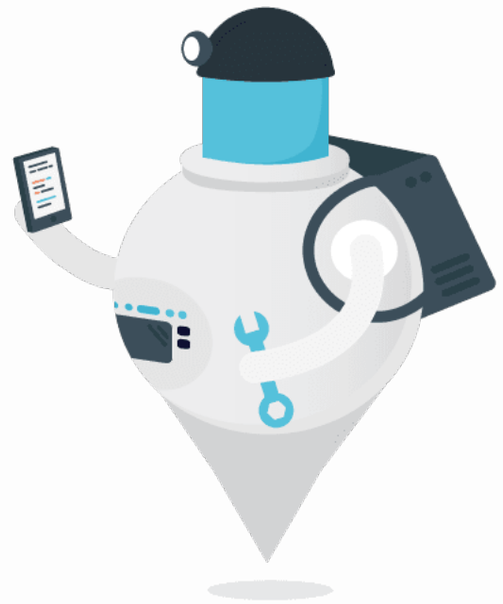
Next Steps:

- Embed your project into a web page with provided embed code
- Use your style in a Mapbox.js map
- Keep exploring style options in Mapbox Studio
- Play with other Mapbox tools

Additional resources:

- Mapbox Studio documentation and guides: www.mapbox.com/mapbox-studio
- Mapbox Guides: www.mapbox.com/guides
- Mapbox.js Documentation: www.mapbox.com/mapbox.js
- Mapbox Web Services: www.mapbox.com/developers/api

Thanks!



Lyzi Diamond, **Mapbox**
@lyzidiamond | lyzi@mapbox.com
Slides: lyzidiamond.com/mapbox-parisoma/slides.pdf

If there's time…

- Head to staticmapmaker.com
- Click on **Mapbox**
- Fill in the fields with your **Access Token** and **Map ID**
- **Embed** the image in a web page, **post** it on Twitter and Facebook, etc!