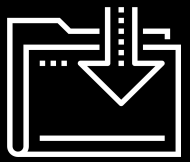
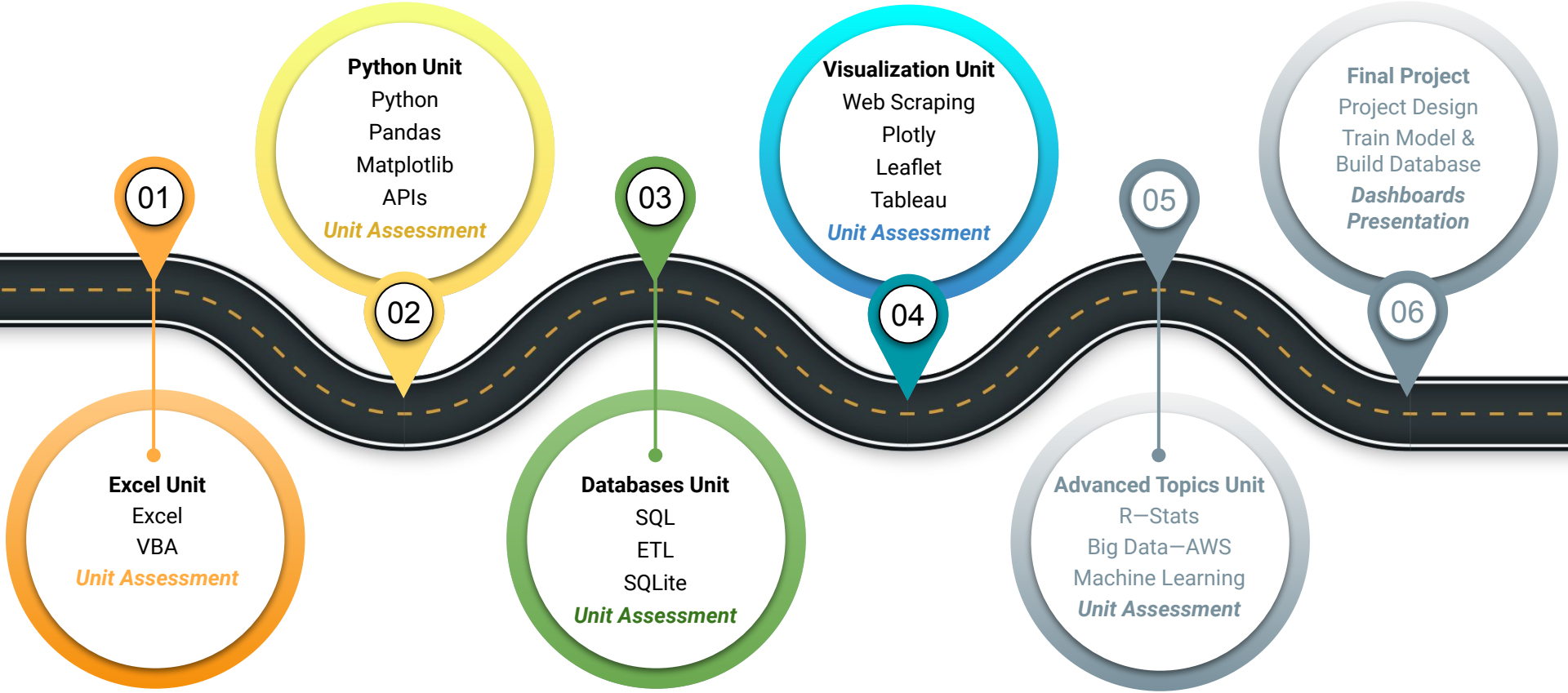
Mapping GeoJSON Data

Data Boot Camp

Lesson 13.2



The Big Picture



This Week: Leaflet.js

By the end of this week, you'll know how to:

- Create and merge a new branch from the main branch on GitHub
- Retrieve data from a GeoJSON file
- Make API requests to a server to host geographical maps
- Populate maps with GeoJSON data using JavaScript and the D3 library
- Add multiple layers to maps using Leaflet control plugins to add user interface controls
- Use JavaScript ES6 functions to add GeoJSON data, features, and interactivity to maps
- Render maps on a local server

This Week's Challenge

Using the skills learned throughout the week, add tectonic plate and earthquake data to the map you've created, and create a new map of your choosing.

Module 13

Today’s Agenda

Today's Agenda

By completing today's activities, you'll learn the following skills:

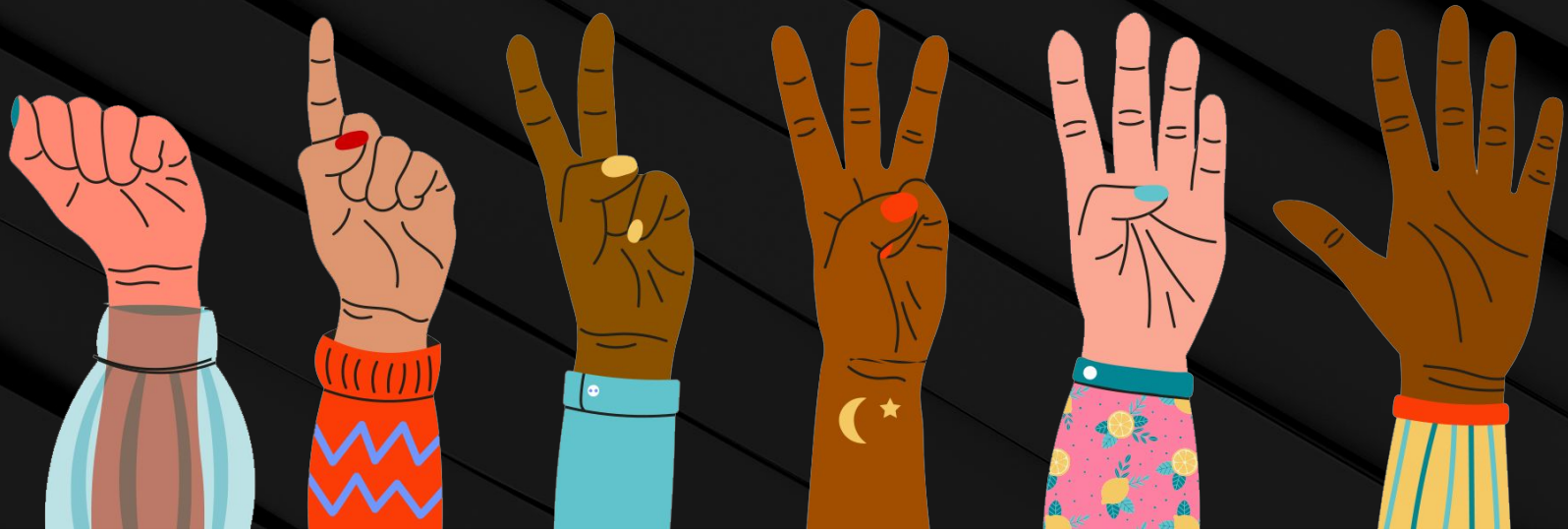
01 Use external GeoJSON data to populate a map

02 Modify the layer controls to add interactivity to maps

Make sure you've downloaded any relevant class files!

FIST TO FIVE:

How comfortable do you feel with this topic?



GeoJSON

What is GeoJSON?

GeoJSON is the easiest way to deliver geographical data.

USGS GeoJSON Data

http://earthquake.usgs.gov/earthquakes/feed/v1.0/summary/all_hour.geojson


```
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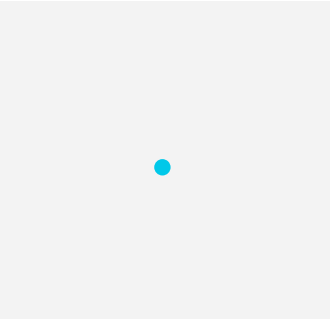
```


The link will open a GeoJSON document depicting all of the earthquakes that have taken place in the last hour.

GeoJSON is an open-standard format for representing simple geographical features, along with their non-spatial attributes, using JSON.

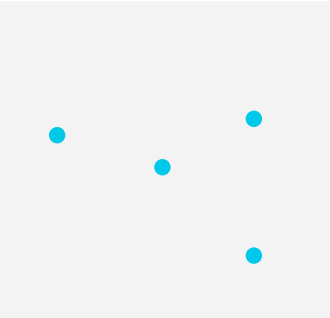
Different Types of Features



Point

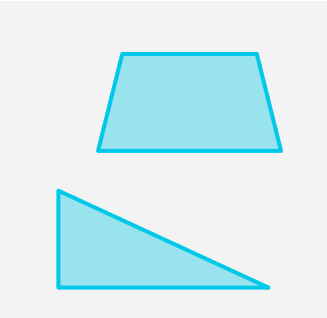
LineString

Polygon



MultiPoint

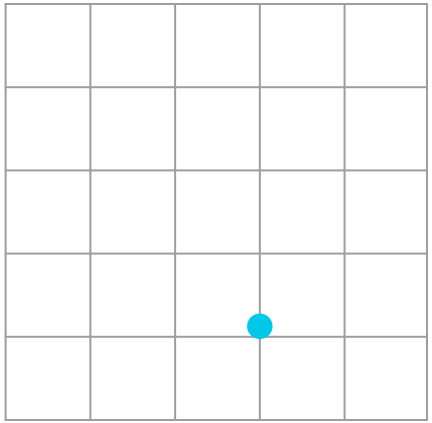
Multi LineString



Multi Polygon

GeoJSON

Geographical features are represented by coordinates and can have other properties attached to them.



```
{
  "type": "Point",
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 }
```

What type of geographical feature is the GeoJSON earthquake data?

It is “Point” Type


```
features: [
  - {
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            rms: 0.01,
            gap: 77,
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            title: "M 0.8 - 7km WNW of Cobb, CA"
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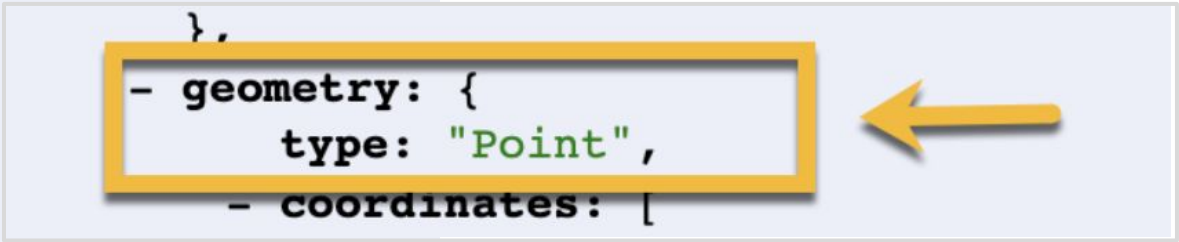
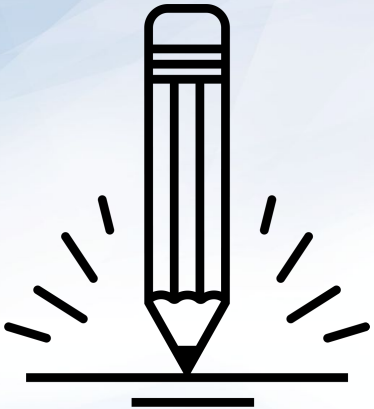


Where have we used this before?

How does this activity equip us for the Challenge?

What can we do if we don’t completely understand this?



Everyone Do: GeoJSON activity

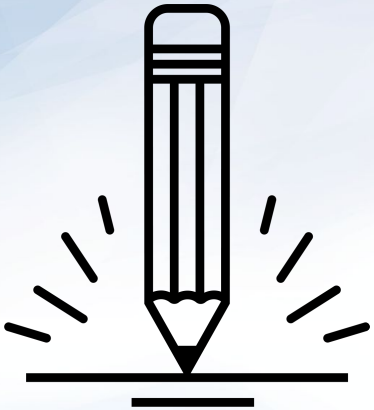
In this activity, we will be working with GeoJSON data to plot occurrences of earthquakes.

Suggested Time:
20 Minutes

Questions?

NYC Neighborhoods

20 minutes



Everyone Do: NYC Neighborhoods

In this activity, we will dive into some advanced Leaflet/GeoJSON functionality by building a map of New York City broken down by boroughs and neighborhoods.

Suggested Time:
25 Minutes

Questions?

Make Your Own Map

Time to Code

In **groups of 4-6**, we will be creating **a data visualization story** by plotting one or more of the provided **Boston GeoJSON datasets**.

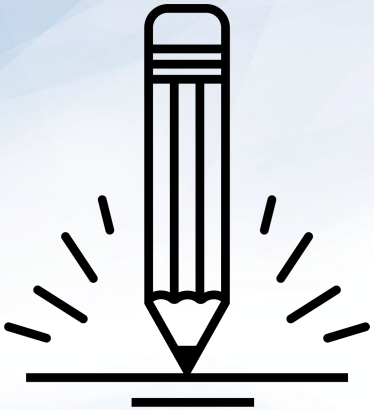
We will **present the visualizations** in the next activity.

Suggested Time:

30 Minutes

Present Your Map

Everyone Do: Map Presentations



In this activity, groups will present their data visualization story. Be sure to answer these questions in your presentation.

- Why did you choose the datasets you did for your story?
- How did you map the data?
- What does the mapped data show the viewer?

Suggested Time:
5 Minutes / Group

Questions?

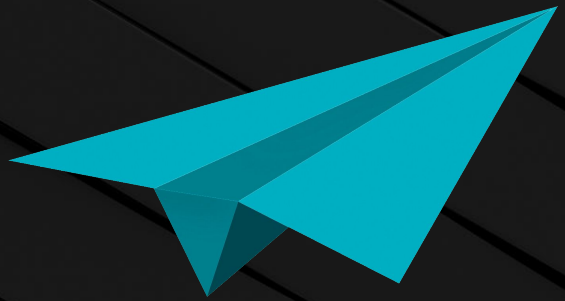
Let's Review

Review the Skills We Covered Today

These are the lessons where these skills are used.

- **Lessons 13.5.1 - 13.5.6** *Mapping GeoJSON data*
- **Lesson 13.6.1** *Mapping earthquake data*
- **Lesson 13.6.2** *Adding a style to the map*
- **Lesson 13.6.3** *Adding a color to the map*
- **Lesson 13.6.4** *Adding an additional overlay*

Questions?



Office Hours

30 Minutes