Map Fun!!! Extra Credit

Submit Assignment

Due Monday by 11:59pm **Points** 3 **Submitting** a file upload **Available** Jun 26 at 10am - Jul 4 at 11:59pm 9 days

Some readings for Monday if you feel like reading:

Drucker-Graphesis.pdf

Tufte_VisualDisplay.pdf

Tufte is very dated but useful for establishing the origins of data visualization, Drucker is a much more significant and well-imagined approach to visual language (and an implicit critique of Tufte).

Download the mapbox points template:

map_points_template.zip

Pick a location--and create between 5 and 10 unique areas for rollovers. The rollovers should yield immediate information (a headline), and, on click, they should produce more information. Using the point-map template, create your own map customizing the following aspects.

Subject matter: first figure out what you want to map. For the purposes of this assignment it can be anything real or fictional: your favorite restaurants, a walk in the park, coolest subway stations, class locations at the new school--or, hopefully, something more exciting/interesting.

Area: choose a location to map. It does not have to be New York City--in fact, anything other than New York City will be more interesting. It can be a country, state, city, neighborhood, block. That is up to you. Note that the closer you zoom in the less of an issue you have with projections (https://axismaps.github.io/thematic-cartography/articles/projections.html) .

The geojson format: this is a standardized form of JSON--specifically set up to be read by mapping programs (not just Mapbox but all mapping programs). The main thing to understand is that each point or shape on a map is considered a *feature*. Each feature is held in an

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array called *featuresCollection*. Each feature has **two important properties--geometry**, which d
as the shape itself--**properties**, which assigns any additional data to that shape. Here's a simple

```
{
"type": "Feature",
"properties": {"party": "Democrat"},
"geometry": {
"type": "Polygon",
"coordinates": [[
[-109.05, 41.00],
[-102.06, 40.99],
[-102.03, 36.99],
[-109.04, 36.99],
[-109.05, 41.00]
]]
}
```

For this assignment and most of your work will be done on the geojson object. **First, you will se
you'll add properties.** And then you will do some light changes to the HTML/JavaScript for styli

Building geometries: you don't have to limit yourself to points, it can be different types of shape
http://geojson.io/ (http://geojson.io/) to find your location and plot your points. **geojson.io will allow you to build a geojson document that your map will import.** Note: from the data standpoint, this document is everything. The points or other shapes you choose will allow you to plot areas on the map. You will then edit the "properties" object to attach different types of information to that location. Create between 5 and 10 points and/or shapes using the geojson.io interface. Then paste the entire featuresCollection object into the points-json.js file.

Properties: Now that you've to set up your geometries, you can start building your properties object. Look at the properties in the original example (points-json.js), they are set up to integrate with the JavaScript in the HTML document. That object contains a number of properties that are recognized by the template, and will allow you to change some of the information and styles related to the point. Here are the properties, and how they function:

"properties": { "name": "here", "group_name": "favs", "group_id": 1, "headline": "home", "article": "radius": "7" }

" name" -- the name of the place

"group_id" -- if you want to use the dropdown bar to turn on and off different groups of points, yo to for this assignment

"group_name" -- The name of the group that will appear in the drop down menu

"headline" -- this is the text you will see when you rollover the point

"article" -- this is HTML that will appear to the right side of the map when you click on the point o

"color" -- this sets the fill color of the point

"radius" -- this sets the pixel width of the circle if it's point

The main properties that you want to edit are headline and article, as is the information ass edit these and get this working before you go onto styles.

Styling your map: there are number of ways to affect the style of the map. In this template you geojson document. Feel free to change whatever you want and the point-json.js. You can also m modifying the CSS. Feel free to do any CSS changes you're comfortable with--if you don't know And note, you do not need to learn Mapbox for this assignment.

Making change to mapbox gl js components:

Tiles: Tiles is the word for the actual pictures of the map that display. One of the main reasons why we need a library like Mapbox is that in order to zoom to different levels of the map--or to navigate across the map--the display of the map itself is quite complicated. At each zoom level there is a different set of small images called tiles that are loaded as needed (loading the entire map all once would would be an enormous amount of data).

One of the great challenges then, is finding map tiles that look okay. The map tiles are served by mapbox. Their styles are not great (you can create custom styles but that is beyond the scope of this class). Here are links to tiles that are available to use for free: you need to embed the calls in the HTML/JS to get them to work.

https://docs.mapbox.com/api/maps/#styles (https://docs.mapbox.com/api/maps/#styles)

If you want to change the tiles you just edit this line in map.html:

`style: 'mapbox://styles/mapbox/light-v10'`