Team 3 - Map Visualization

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This visualization displays pollution concentration values gathered by multiple monitoring stations around the globe. There are two categories that are shown in this visualization, PM10 and PM2.5. These are the particle matter sizes of the air pollution, PM2.5 being the smaller and more harmful pollution. PM10 is shown by the colour hue of blue, and PM2.5 is shown by a colour hue of orange. The density of the particle matter is by changing the data points' sizes and shade. Higher densities are shown by both a larger size and darker shade.

The following data is used in this visualization:

- Globe drawn using an open source GeoJSON file.
- Pollution Dataset provided by the WHO.
- World City latitude and longitude values were collected ourselves by calling WebQuest geocoding API
- D3's Mercator projection implementation is used

Some challenges we ran into were finding a dataset for the city latitude and longitude coordinates for all our data points. The WHO pollution dataset uses several small rural towns that are missing in many of the city location datasets that we found. The pollution dataset is also inconsistent with the naming format of the cities, as a result of collecting the data from many different sources. This made it difficult to match the data between datasets accurately. We ended up creating a java application that reads from our dataset, calls WebQuest's geocoding API, and then writes the world coordinates to a new csv. Any points that could not be geocoded to a location are accumulated and placed at the centroid of the country of origin.

The github repository can be found here:
https://github.com/BenLeech/CMPT384-pollution-visualization

The visualization is hosted here:
https://benleech.github.io/CMPT384-pollution-visualization/index.html