2019 Winter CSE 495 Week3 Design Notebook

* Meeting Notes:
  + Showed Nick the dataset we picked out and discussed with Nick on how to join dataset more efficiently
  + Nick demonstrated how the AccessMap Seattle v2 data is built.

<https://github.com/AccessMap/accessmap-data/blob/71953f6715e18d21080a4a35afbc8bd8c9bbca7c/cities/seattle/Snakefile#L1058-L1094>

* + Nick showed us how to find the closest sidewalk to a certain place using the spatial index and how to combine dataframe with GeoPandas. This approach costs about 10 seconds to parse through the whole dataset, which is much faster than the way we used shapely and buffer the polygon last quarter.
  + Split the task to each group members.
* Technical Notes:
  + Implemented “join\_restroom\_fountain\_to\_graph.py” on public restroom and drinking fountain dataset using spatial index method. Labeled every sidewalk which has either a drinking fountain or a public restroom near it.
  + Generated 2 new csv files:
    - ‘new\_sw\_with\_fountain.csv’: Added 1 new column indicating whether a drinking fountain is near the sidewalk.
    - ‘new\_sw\_with\_restroom.csv’: Added 1 new column indicating whether a public restroom is near the sidewalk.
* To Do List:
  + Integrate the work of each member into one sidewalk file
  + Make the joint function more generic so that once we get some new data, we can directly get the information by using the code we wrote (compatible for different source files).
  + Import the new dataset into QGIS and visualize the map.