**Use case 1: Mapping crime data with apartment data**

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We wrote two programs to realize use case 1: find\_apt.py and map\_apt.py.

See below for detailed user directions.

**find\_apt.py**

(import pandas, requests, json)

1. read *Cleaned\_Data.csv* to dataframe
2. define a function called ***find\_lat\_lng(address)*** to transform the address column into latitude and longitude columns
3. apply the function to apartment address and store coordinates information in two new columns
4. save the new dataframe to csv file: *'apt\_data.csv'*

**map\_apt.py**

(import pandas, folium)

1. read *apt\_data.csv* and *crime\_data.csv* to dataframes
2. draw the boundary lines of Pittsburgh with **folium.GeoJson()**
3. add the apartment data as markers with **folium.Marker()**, add pop-up info (dataframe type)
4. color the map with crime data with **folium.Choropleth()**
5. mark the location of Hamburgh Hall
6. save the map to html file: *'pitt\_map.html'*

***\* Notes:*** *To apply the find\_lat\_lng(address) function, you have to first apply your Google Maps API KEY at* [*https://code.google.com/apis/console*](https://code.google.com/apis/console)