Week 3 Assignment

January 22, 2021

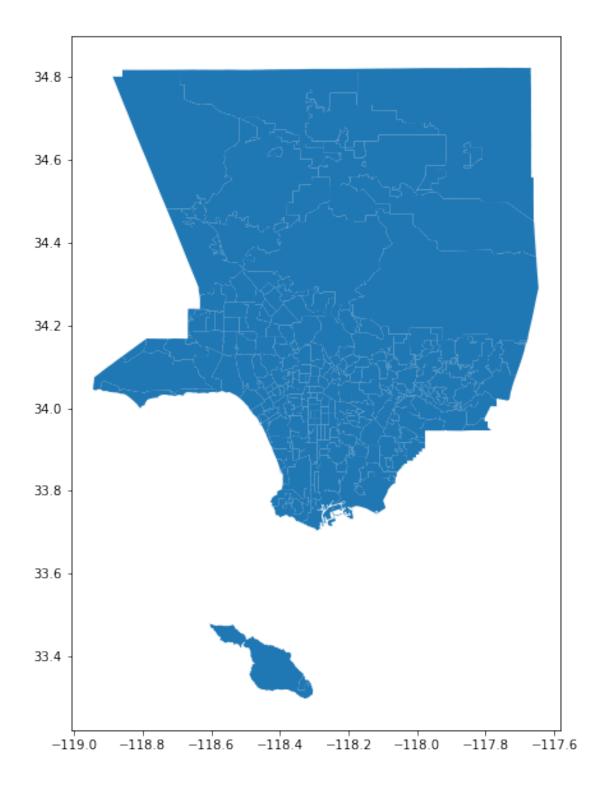
```
[59]: #Alessandro's Map on LA Counties
      #The graphs that I have produced are extremely relavant to my research question_
      #My partner and I are seeking to identify the correlation between the \Box
       → socioeconomic status of each country, the rate of infectection, and the rate u
       \hookrightarrow of vaccination.
      \#What\ relationship\ exists\ between\ an\ individual's\ country\ of\ residence\ and_{\sqcup}
       → their ability to receive the vaccine? What factors are considered when
       → determining which countries will receive the vaccine?
      #What social inequities are resulting from the distribution of the COVID-19_{\sqcup}
       →vaccine?
      #The graph I have produced are sorted by Counties and is it apprent with_
       →counties are most affluent and which are least affluent.
      \#Research\ has\ shown\ that\ less\ affluent\ neighborhoods\ are\ less\ likely\ to_{\sqcup}
       \rightarrowrecieved the COVID-19 vaccine compared with their much more affluent
       \hookrightarrow counterparts.
      # This will make the general data
      import pandas as pd
      # visualize spatial data
      import geopandas as gpd
      # basemaps
      import contextily as ctx
      # plots
      import matplotlib.pyplot as plt
[60]: gdf = gpd.read_file('map2.geojson')
```

[61]: gdf.shape

gdf.head()

```
[61]:
                                       kind
                                                  external_id
                                                                          name
      O L.A. County Neighborhood (Current)
                                                        acton
                                                                          Acton
      1 L.A. County Neighborhood (Current)
                                              adams-normandie Adams-Normandie
      2 L.A. County Neighborhood (Current)
                                                 agoura-hills
                                                                  Agoura Hills
      3 L.A. County Neighborhood (Current)
                                                   agua-dulce
                                                                    Agua Dulce
      4 L.A. County Neighborhood (Current)
                                                                      Alhambra
                                                     alhambra
                                                    slug \
      0
                   acton-la-county-neighborhood-current
      1
         adams-normandie-la-county-neighborhood-current
      2
            agoura-hills-la-county-neighborhood-current
      3
              agua-dulce-la-county-neighborhood-current
      4
                alhambra-la-county-neighborhood-current
         /1.0/boundary-set/la-county-neighborhoods-curr...
      1 /1.0/boundary-set/la-county-neighborhoods-curr...
      2 /1.0/boundary-set/la-county-neighborhoods-curr...
      3 /1.0/boundary-set/la-county-neighborhoods-curr...
      4 /1.0/boundary-set/la-county-neighborhoods-curr...
                                                   metadata \
      0 {'sqmi': 39.3391089485, 'type': 'unincorporate...
      1 {'sqmi': 0.805350187789, 'type': 'segment-of-a...
      2 {'sqmi': 8.14676029818, 'type': 'standalone-ci...
      3 {'sqmi': 31.4626319451, 'type': 'unincorporate...
      4 {'sqmi': 7.62381430605, 'type': 'standalone-ci...
                                               resource uri
      0 /1.0/boundary/acton-la-county-neighborhood-cur...
      1 /1.0/boundary/adams-normandie-la-county-neighb...
      2 /1.0/boundary/agoura-hills-la-county-neighborh...
      3 /1.0/boundary/agua-dulce-la-county-neighborhoo...
      4 /1.0/boundary/alhambra-la-county-neighborhood-...
                                                   geometry
      O MULTIPOLYGON (((-118.20262 34.53899, -118.1894...
      1 MULTIPOLYGON (((-118.30901 34.03741, -118.3004...
      2 MULTIPOLYGON (((-118.76193 34.16820, -118.7263...
      3 MULTIPOLYGON (((-118.25468 34.55830, -118.2555...
      4 MULTIPOLYGON (((-118.12175 34.10504, -118.1168...
[62]: #plot it
      gdf.plot(figsize=(10,10))
```

[62]: <matplotlib.axes._subplots.AxesSubplot at 0x7ffaaba21f70>



```
[63]: gdf_sorted = gdf.sort_values(by='slug',ascending = False)
# this will produce a nice plot
gdf_sorted.head(100).plot(figsize=(10,10),column='slug',legend=True)
```

```
/opt/conda/lib/python3.8/site-packages/mapclassify/classifiers.py:235:
UserWarning: Warning: Not enough unique values in array to form k classes
Warn(
/opt/conda/lib/python3.8/site-packages/mapclassify/classifiers.py:238:
UserWarning: Warning: setting k to 1
    Warn("Warning: setting k to %d" % k_q, UserWarning)
/opt/conda/lib/python3.8/site-packages/mapclassify/classifiers.py:888:
RuntimeWarning: invalid value encountered in double_scalars
    gadf = 1 - self.adcm / adam
```

[63]: <matplotlib.axes._subplots.AxesSubplot at 0x7ffaaba49a00>

pico-robertson-la-county-neighborhood-current pico-union-la-county-neighborhood-current playa-del-rey-la-county-neighborhood-current playa-vista-la-county-neighborhood-current pomona-la-county-neighborhood-current porter-ranch-la-county-neighborhood-current quartz-hill-<mark>la-county-ne</mark>ighborhood-current ramona-la-county-neighborhood-current rancho-dominguez-la-county-neighborhood-current rancho-palos-verdes-la-county-neighborhood-current rancho-park-la-county-neighborhood-current redondo-beach-la-county-neighborhood-current reseda-la-county-neighborhood-current ridge-route-la-county-neighborhood-current rolling-hills-estates-la-county-neighborhood-current rolling-hills-la-county-neighborhood-current rosemead-la-county-neighborhood-current rowland-heights-la-county-neighborhood-current san-dimas-la-county-neighborhood-current san-fernando-la-county-neighborhood-current san-gabriel-la-county-neighborhood-current san-marino-la-county-neighborhood-current san-pasqual-la-county-neighborhood-current san-pedro-la-county-neighborhood-current santa-clarita-la-county-neighborhood-current santa-fe-springs-la-county-neighborhood-current santa-monica-la-county-neighborhood-current sawtelle-la-county-neighborhood-current sepulveda-basin-la-county-neighborhood-current shadow-hills-la-county-neighborhood-current sherman-oaks-la-county-neighborhood-current sierra-madre-la-county-neighborhood-current signal-hill-la-county-neighborhood-current silver-lake-la-county-neighborhood-current south-diamond-bar-la-county-neighborhood-current south-el-monte-la-county-neighborhood-current south-gate-la-county-neighborhood-current -117.8 -117.6 south-park-la-county-neighborhood-current south-pasadena-la-county-neighborhood-current south-san-gabriel-la-county-neighborhood-current south-san-jose-hills-la-county-neighborhood-current south-whittier-la-county-neighborhood-current southeast-antelope-valley-la-county-neighborhood-current stevenson-ranch-la-county-neighborhood-current studio-city-la-county-neighborhood-current sun-valley-la-county-neighborhood-current sun-village-la-county-neighborhood-current sunland-la-county-neighborhood-current sylmar-la-county-neighborhood-current tarzana-la-county-neighborhood-current temple-city-la-county-neighborhood-current toluca-lake-la-county-neighborhood-current topanga-la-county-neighborhood-current torrance-la-county-neighborhood-current tujunga-canyons-la-county-neighborhood-current tujunga-la-county-neighborhood-current unincorporated-catalina-island-la-county-neighborhood-current unincorporated-santa-monica-mountains-la-county-neighborhood-current unincorporated-santa-susana-mountains-la-county-neighborhood-current universal-city-la-county-neighborhood-current university-park-la-county-neighborhood-current val-verde-la-county-neighborhood-current valinda-la-county-neighborhood-current valley-glen-la-county-neighborhood-current valley-village-la-county-neighborhood-current van-nuys-la-county-neighborhood-current venice-la-county-neighborhood-current vermont-knolls-la-county-neighborhood-current vermont-slauson-la-county-neighborhood-current vermont-square-la-county-neighborhood-current vermont-vista-la-county-neighborhood-current vernon-la-county-neighborhood-current veterans-administration-la-county-neighborhood-current view-park-windsor-hills-la-county-neighborhood-current vincent-la-county-neighborhood-current walnut-la-county-neighborhood-current walnut-park-la-county-neighborhood-current watts-la-county-neighborhood-current west-adams-la-county-neighborhood-current west-carson-la-county-neighborhood-current west-compton-la-county-neighborhood-current west-covina-la-county-neighborhood-current west-hills-la-county-neighborhood-current west-hollywood-la-county-neighborhood-current west-los-angeles-la-county-neighborhood-current west-puente-valley-la-county-neighborhood-current west-san-dimas-la-county-neighborhood-current west-whittier-los-nietos-la-county-neighborhood-current westchester-la-county-neighborhood-current westlake-la-county-neighborhood-current westlake-village-la-county-neighborhood-current westmont-la-county-neighborhood-current westwood-la-county-neighborhood-current whittier-la-county-neighborhood-current whittier-narrows-la-county-neighborhood-current willowbrook-la-county-neighborhood-current wilmington-la-county-neighborhood-current windsor-square-la-county-neighborhood-current

winnetka-la-county-neighborhood-current woodland-hills-la-county-neighborhood-current

