

Week 3 Assignment

January 22, 2021

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[59]: #Alessandro's Map on LA Counties
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#The graphs that I have produced are extremely relavant to my research question,
↳of COVID-19.
#My partner and I are seeking to identify the correlation between the
↳socioeconomic status of each country, the rate of infectection, and the rate
↳of vaccination.
#What relationship exists between an individual's country of residence and
↳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
↳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
↳recieved the COVID-19 vaccine compared with their much more affluent
↳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
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[60]: gdf = gpd.read_file('map2.geojson')
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[61]: gdf.shape
gdf.head()
```

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[61]:
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	kind	external_id	name \
0	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

	set \
0	/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...

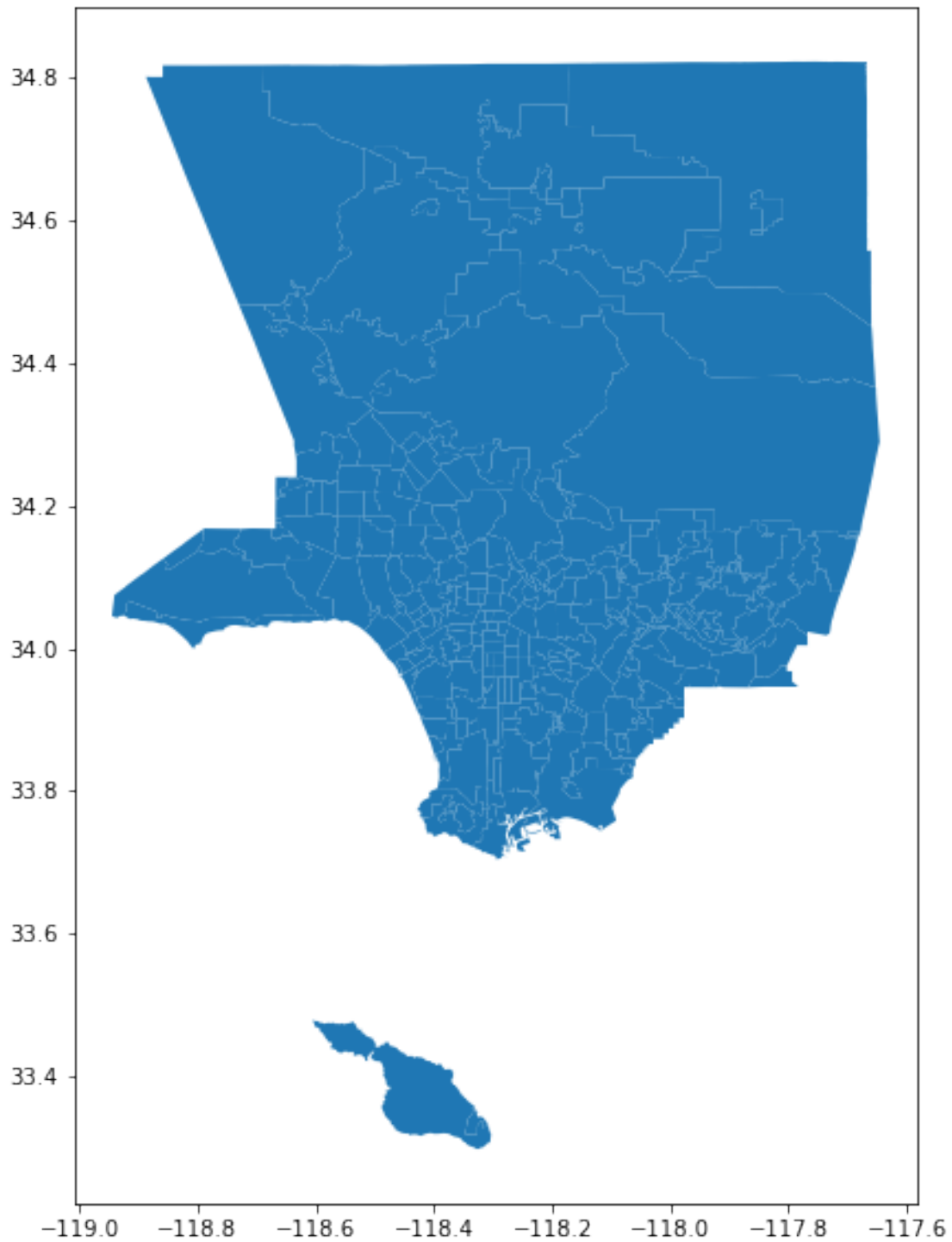
	metadata \
0	{'sqmi': 39.3391089485, 'type': 'unincorporate...
1	{'sqmi': 0.805350187789, 'type': 'segment-of-a...
2	{'sqmi': 8.14676029818, 'type': 'standalone-ci...
3	{'sqmi': 31.4626319451, 'type': 'unincorporate...
4	{'sqmi': 7.62381430605, 'type': 'standalone-ci...

	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
0	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...

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[62]: #plot it
      gdf.plot(figsize=(10,10))
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[62]: <matplotlib.axes._subplots.AxesSubplot at 0x7ffaaba21f70>
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[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)
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# this makes the subplots
fig, axs = plt.subplots(1, 2, figsize=(15, 12))

# provide the subplot with names
ax1, ax2 = axs

# count map
gdf.plot(column='set',
          cmap='RdYlGn_r',
          scheme='quantiles',
          k=5,
          edgecolor='white',
          linewidth=0.,
          alpha=0.75,
          ax=ax1,
          legend=True)

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/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

```

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



