

# dataexploration

October 19, 2020

```
[1]: import geopandas as gpd
```

```
[12]: firedepartment = gpd.read_file('../homework/  
↳la-county-fire-department-station-areas.geojson')
```

```
[13]: type(firedepartment)
```

```
[13]: geopandas.geodataframe.GeoDataFrame
```

```
[14]: firedepartment.head()
```

```
[14]:
```

		kind	external_id	name	\
0	L.A. County Fire Department Station Area		001	001	
1	L.A. County Fire Department Station Area		002	002	
2	L.A. County Fire Department Station Area		003	003	
3	L.A. County Fire Department Station Area		004	004	
4	L.A. County Fire Department Station Area		005	005	

  

	slug	\
0	la-county-fire-department-station-area-001	
1	la-county-fire-department-station-area-002	
2	la-county-fire-department-station-area-003	
3	la-county-fire-department-station-area-004	
4	la-county-fire-department-station-area-005-2	

  

	set	metadata	\
0	/1.0/boundary-set/la-county-fire-department-st...	{'STATID': '001'}	
1	/1.0/boundary-set/la-county-fire-department-st...	{'STATID': '002'}	
2	/1.0/boundary-set/la-county-fire-department-st...	{'STATID': '003'}	
3	/1.0/boundary-set/la-county-fire-department-st...	{'STATID': '004'}	
4	/1.0/boundary-set/la-county-fire-department-st...	{'STATID': '005'}	

  

	resource_uri	\
0	/1.0/boundary/la-county-fire-department-statio...	
1	/1.0/boundary/la-county-fire-department-statio...	
2	/1.0/boundary/la-county-fire-department-statio...	
3	/1.0/boundary/la-county-fire-department-statio...	

```
4 /1.0/boundary/la-county-fire-department-statio...
```

```
                                geometry
0  MULTIPOLYGON (((-118.15713 34.03711, -118.1763...
1  MULTIPOLYGON (((-118.35058 33.79532, -118.3544...
2  MULTIPOLYGON (((-118.15713 34.03711, -118.1569...
3  MULTIPOLYGON (((-118.08704 34.07223, -118.0754...
4  MULTIPOLYGON (((-118.05805 34.12185, -118.0589...
```

```
[15]: firedepartment.tail()
```

```
[15]:                                     kind external_id name \
191  L.A. County Fire Department Station Area          184  184
192  L.A. County Fire Department Station Area          185  185
193  L.A. County Fire Department Station Area          186  186
194  L.A. County Fire Department Station Area          187  187
195  L.A. County Fire Department Station Area          188  188
```

```
                                slug \
191  la-county-fire-department-station-area-184
192  la-county-fire-department-station-area-185
193  la-county-fire-department-station-area-186
194  la-county-fire-department-station-area-187
195  la-county-fire-department-station-area-188
```

```
                                set          metadata \
191  /1.0/boundary-set/la-county-fire-department-st... {'STATID': '184'}
192  /1.0/boundary-set/la-county-fire-department-st... {'STATID': '185'}
193  /1.0/boundary-set/la-county-fire-department-st... {'STATID': '186'}
194  /1.0/boundary-set/la-county-fire-department-st... {'STATID': '187'}
195  /1.0/boundary-set/la-county-fire-department-st... {'STATID': '188'}
```

```
                                resource_uri \
191  /1.0/boundary/la-county-fire-department-statio...
192  /1.0/boundary/la-county-fire-department-statio...
193  /1.0/boundary/la-county-fire-department-statio...
194  /1.0/boundary/la-county-fire-department-statio...
195  /1.0/boundary/la-county-fire-department-statio...
```

```
                                geometry
191  MULTIPOLYGON (((-117.77663 34.08610, -117.7758...
192  MULTIPOLYGON (((-117.72253 34.05191, -117.7225...
193  MULTIPOLYGON (((-117.73661 34.10696, -117.7367...
194  MULTIPOLYGON (((-117.78825 34.04287, -117.7890...
195  MULTIPOLYGON (((-117.76297 34.03663, -117.7566...
```

```
[16]: firedepartment.sample()
```

```
[16]:                                     kind external_id name \
30  L.A. County Fire Department Station Area          029  029

                                     slug \
30  la-county-fire-department-station-area-029

                                     set          metadata \
30  /1.0/boundary-set/la-county-fire-department-st... {'STATID': '029'}

                                     resource_uri \
30  /1.0/boundary/la-county-fire-department-statio...

                                     geometry
30  MULTIPOLYGON (((-117.96940 34.11214, -117.9687...
```

```
[17]: firedepartment.dtypes
```

```
[17]: kind          object
external_id        object
name               object
slug               object
set                object
metadata           object
resource_uri       object
geometry           geometry
dtype: object
```

```
[18]: firedepartment.info()
```

```
<class 'geopandas.geodataframe.GeoDataFrame'>
RangeIndex: 196 entries, 0 to 195
Data columns (total 8 columns):
#   Column          Non-Null Count  Dtype
---  -
0   kind             196 non-null   object
1   external_id      196 non-null   object
2   name             196 non-null   object
3   slug             196 non-null   object
4   set              196 non-null   object
5   metadata         196 non-null   object
6   resource_uri     196 non-null   object
7   geometry         196 non-null   geometry
dtypes: geometry(1), object(7)
memory usage: 12.4+ KB
```

```
[19]: firedepartment.shape
```

```
[19]: (196, 8)
```

```
[20]: firedepartment.columns.to_list()
```

```
[20]: ['kind',  
      'external_id',  
      'name',  
      'slug',  
      'set',  
      'metadata',  
      'resource_uri',  
      'geometry']
```

```
[ ]: firedepartment.LINE
```

```
[ ]: firedepartment_trimmed.plot()
```

```
[ ]:
```