Indiv2

January 21, 2021

0.0.1 Individual Assignment: Data Exploration

Topic: Health and Mental Health Facilities in the Los Angeles County

For this assignment, I chose a dataset that provides information in regards to health and mental health facilities in the Los Angeles County. The data provides information of the facilities name, city where it is located, zip code, and other information that is useful to the user. Throught my research, I hope to gain more of an understanding on where health facilities are located in the county of Los Angeles and how whether these facilities are located in neighborhoods with close proximity to lower/higher income populations. I am also using this information to help evaluate research questions for my group assignment.

[30]:
```
import geopandas as gpd

# this is to import the geopandas library to help read the .csv file
```

[8]:
```
agency = gpd.read_file("datasets/php2.csv")

# i am importing the file called "php2.csv" by also calling it "agency"
```

[31]:
```
agency.shape

# purpose: read the size of the array
# outcome: in this case, the array returns the value of (224,32) with the rows␣
 ↪making up 224 and the columns making up 32
```

[31]:
```
(224, 32)
```

[10]:
```
agency.head()
# purpose: .head() calls the first n of the dataset
# outcome: the table i recieve shows me the values of the first 20 columns
```

[10]:

	X	Y	OBJECTID	field_4	ext_id	\
0	-13164358.3413377	4046010.13008812	31			
1	-13165282.6559409	4033820.24640467	60			
2	-13156488.1111893	4003064.53244273	87			
3	-13174516.2470068	4003983.7224774	125			
4	-13187518.2522604	4034100.15494453	127			

```
                      cat1                    cat2 cat3  \
0  Health and Mental Health  Public Health Programs
1  Health and Mental Health  Public Health Programs
2  Health and Mental Health  Public Health Programs
3  Health and Mental Health  Public Health Programs
4  Health and Mental Health  Public Health Programs

                      org_name  \
0
1      Catholic Healthcare West
2  Memorial Care Health Systems
3                 www.fpamg.net
4                 www.fpamg.net

                                            Name  …  \
0       Glendale Memorial Hospital And Health Center  …
1                 California Hospital Medical Center  …
2                 Long Beach Memorial Medical Center  …
3  Family Planning Associates Medical Group - Tor…  …
4  Family Planning Associates Medical Group - Wes…  …

                                link use_type     latitude      longitude  \
0  http://egis3.lacounty.gov/lms/?p=570  publish  34.12805844  -118.25744298
1  http://egis3.lacounty.gov/lms/?p=574  publish  34.03736436  -118.26574624
2  http://egis3.lacounty.gov/lms/?p=577  publish   33.8081073   -118.1867435
3  http://egis3.lacounty.gov/lms/?p=601  publish    33.814968    -118.348693
4  http://egis3.lacounty.gov/lms/?p=602  publish    34.039448    -118.465492

             date_updated email dis_status           POINT_X  \
0  2016/01/22 16:10:02+00                   6483758.47166698
1  2016/01/21 17:29:05+00                   6481158.34366514
2  2016/01/25 13:37:43+00                   6504938.42963505
3  2013/06/01 11:50:56+00                   6455747.65334488
4  2013/06/01 11:50:56+00                   6420646.08837755

            POINT_Y geometry
0  1869083.06919689     None
1  1836084.42489247     None
2  1752598.80807139     None
3  1755226.62236956     None
4  1837062.81171523     None

[5 rows x 32 columns]
```

[32]:
```
agency.info()
# purpose: provides a summary of the dataframe, in this case, "agency"
```

```
# outcome: i can see clearly which columns and what rows i have along with␣
 ↪their data types
```

```
<class 'geopandas.geodataframe.GeoDataFrame'>
RangeIndex: 224 entries, 0 to 223
Data columns (total 32 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   X             224 non-null    object
 1   Y             224 non-null    object
 2   OBJECTID      224 non-null    object
 3   field_4       224 non-null    object
 4   ext_id        224 non-null    object
 5   cat1          224 non-null    object
 6   cat2          224 non-null    object
 7   cat3          224 non-null    object
 8   org_name      224 non-null    object
 9   Name          224 non-null    object
 10  addrln1       224 non-null    object
 11  addrln2       224 non-null    object
 12  city          224 non-null    object
 13  state         224 non-null    object
 14  hours         224 non-null    object
 15  phones        224 non-null    object
 16  url           224 non-null    object
 17  info1         224 non-null    object
 18  info2         224 non-null    object
 19  post_id       224 non-null    object
 20  description   224 non-null    object
 21  zip           224 non-null    object
 22  link          224 non-null    object
 23  use_type      224 non-null    object
 24  latitude      224 non-null    object
 25  longitude     224 non-null    object
 26  date_updated  224 non-null    object
 27  email         224 non-null    object
 28  dis_status    224 non-null    object
 29  POINT_X       224 non-null    object
 30  POINT_Y       224 non-null    object
 31  geometry      0 non-null      geometry
dtypes: geometry(1), object(31)
memory usage: 56.1+ KB
```

[33]:
```
agency["city"]
# purpose: this is suppose to call only what i mention, in this case "city"
# outcome: i got list of the all the cities represented in the dataframe␣
 ↪"Agency"
```

[33]:
```
0         Glendale
1      Los Angeles
2       Long Beach
3         Torrance
4      Los Angeles
          …
219       Lakewood
220      Lancaster
221       Palmdale
222    Los Angeles
223       Commerce
Name: city, Length: 224, dtype: object
```

[34]:
```
agency["city"].value_counts()
# purpose: this calculates the number of times each term is mentioned in the␣
 ↪dataframe
# outcome: i now have a list of how many times each city is connected to a␣
 ↪hospital
```

[34]:
```
Los Angeles       66
Long Beach        14
Pasadena          12
Torrance          11
Lancaster          6
                  ..
Covina             1
Marina Del Rey     1
Arcadia            1
Bell               1
Pico Rivera        1
Name: city, Length: 68, dtype: int64
```

[14]:
```
zip_value = agency["city"].value_counts()
zip_value
```

[14]:
```
Los Angeles       66
Long Beach        14
Pasadena          12
Torrance          11
Lancaster          6
                  ..
Covina             1
Marina Del Rey     1
Arcadia            1
Bell               1
Pico Rivera        1
Name: city, Length: 68, dtype: int64
```

[15]:
```
zip_value = zip_value.reset_index()
zip_value
```

[15]:
```
              index  city
0       Los Angeles    66
1        Long Beach    14
2          Pasadena    12
3          Torrance    11
4         Lancaster     6
..              …   …
63           Covina     1
64  Marina Del Rey     1
65         Arcadia     1
66            Bell     1
67     Pico Rivera     1

[68 rows x 2 columns]
```

[16]:
```
zip_value.columns = ["city", "index"]
```

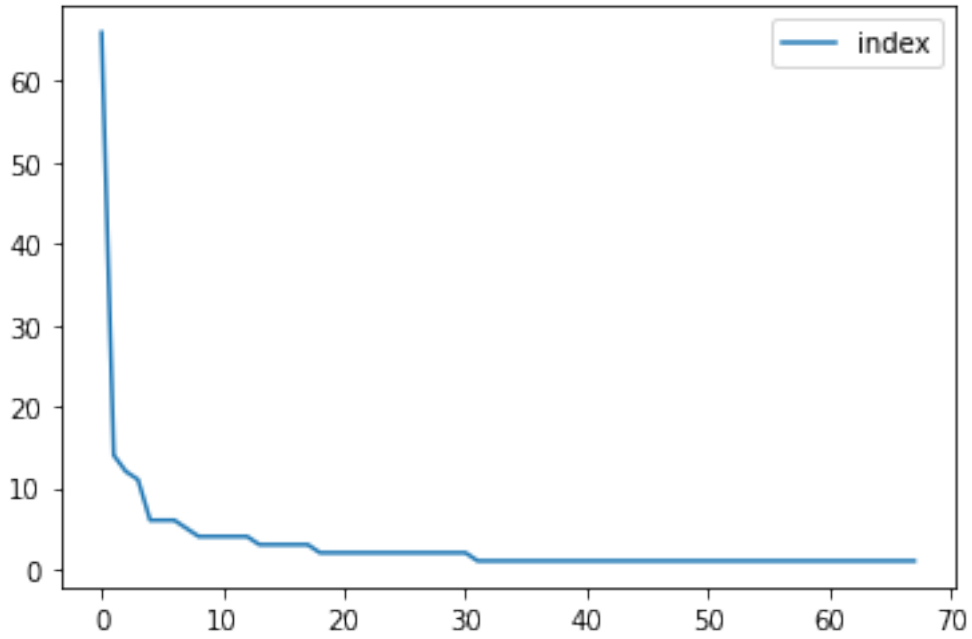
[17]:
```
zip_value
```

[17]:
```
              city  index
0       Los Angeles     66
1        Long Beach     14
2          Pasadena     12
3          Torrance     11
4         Lancaster      6
..              …    …
63           Covina      1
64  Marina Del Rey      1
65         Arcadia      1
66            Bell      1
67     Pico Rivera      1

[68 rows x 2 columns]
```

[35]:
```
zip_value.plot()
# purpose: I am plotting the values of zip_value to a graph with the x value␣
 ↪being the city and y being the number of hospitals in that city
# outcome: without including the number of hospitals under "los angeles," I can␣
 ↪see how the number of hospitals ranges from city to city
```

[35]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x7ff833c12ca0>
```



[36]:
```
desired_columns = ["zip","cat1","city","Name"]
agency[desired_columns]
# purpose: i want to filter the columns so that it shows me more specific␣
 ↪information
# outcome: i recieved more relavent information on the names of the hospitals,␣
 ↪where they are located, and thier zip code
```

[36]:

	zip	cat1	city	Name
0	91204	Health and Mental Health	Glendale	Glendale Memorial Hospital And Health Center
1	90015	Health and Mental Health	Los Angeles	California Hospital Medical Center
2	90806	Health and Mental Health	Long Beach	Long Beach Memorial Medical Center
3	90505	Health and Mental Health	Torrance	Family Planning Associates Medical Group - Tor…
4	90025	Health and Mental Health	Los Angeles	Family Planning Associates Medical Group - Wes…
..	…	…	…	
219	90713	Health and Mental Health	Lakewood	
220	93535	Health and Mental Health	Lancaster	
221	93550	Health and Mental Health	Palmdale	
222	90056	Health and Mental Health	Los Angeles	
223	90040	Health and Mental Health	Commerce	

```
..                                                  …
219  Planned Parenthood Los Angeles - Planned Paren…
220          Bartz - Altadonna Community Health Center
221  Planned Parenthood Los Angeles - Antelope Vall…
222  California State Department Of Rehabilitation …
223                        Zg International Healthcare

[224 rows x 4 columns]
```

[ ]:

[ ]:

[ ]:

[ ]: