q1_code

December 7, 2022

```python
import pandas as pd
```

```python
df = pd.read_csv("Data/social_capital_county.csv")
```

```python
df
```

```
      county          county_name  num_below_p50    pop2018  ec_county  \
0       1001     Autauga, Alabama     5922.39210    55200.0    0.72077
1       1003     Baldwin, Alabama    15458.39600   208107.0    0.74313
2       1005     Barbour, Alabama     4863.97360    25782.0    0.41366
3       1007        Bibb, Alabama     3061.49340    22527.0    0.63152
4       1009      Blount, Alabama     6740.91160    57645.0    0.72562
...      ...                  ...            ...        ...        ...
3084   56037  Sweetwater, Wyoming     2402.96900    44117.0    0.96235
3085   56039       Teton, Wyoming      783.24982    23059.0    1.07623
3086   56041       Uinta, Wyoming     2174.06180    20609.0    0.95452
3087   56043    Washakie, Wyoming      872.51544     8129.0    0.90667
3088   56045      Weston, Wyoming      635.28436     7100.0    0.97840

      ec_se_county  child_ec_county  child_ec_se_county  ec_grp_mem_county  \
0          0.00831          1.11754             0.02467            0.77223
1          0.00661          0.83064             0.01629            0.76215
2          0.00978          0.58541             0.02707            0.35927
3          0.01175          0.72265             0.03027            0.68094
4          0.00985          0.76096             0.02466            0.79584
...            ...              ...                 ...                ...
3084       0.01280          1.14781             0.02794            1.13449
3085       0.01744          1.23113             0.04692            1.13296
3086       0.01404          1.04595             0.03455            0.92831
3087       0.01928          0.90794             0.04962            0.78223
3088       0.02036          1.09118             0.05823            0.93135

      ec_high_county  …  child_exposure_county  child_high_exposure_county  \
0            1.21372  …                1.14816                     1.19944
1            1.28302  …                0.84588                     1.00797
2            0.91897  …                0.63306                     0.71967
3            1.06378  …                0.71433                     0.72395
```

```
4              1.10569  …              0.74821                    0.79375
…                 …  …                 …                          …
3084           1.32399  …              1.12164                    1.12907
3085           1.63551  …              1.32874                    1.35341
3086           1.32040  …              1.05446                    1.06284
3087           1.29208  …              0.88480                    0.88589
3088           1.28553  …              1.03325                    1.05526


       bias_grp_mem_county  bias_grp_mem_high_county  child_bias_county  \
0                  0.05526                  -0.22748            0.02668
1                  0.02950                  -0.21519            0.01802
2                  0.13457                  -0.34086            0.07528
3                  0.04108                  -0.27727           -0.01165
4                  0.00217                  -0.24946           -0.01704
…                      …                        …                  …
3084               0.09519                  -0.12030           -0.02333
3085               0.14337                  -0.11958            0.07346
3086               0.13816                  -0.12194            0.00808
3087               0.06667                  -0.20435           -0.02615
3088               0.02279                  -0.17229           -0.05606


       child_high_bias_county  clustering_county  support_ratio_county  \
0                    -0.08229            0.10347               0.98275
1                    -0.05241            0.09624               0.98684
2                    -0.19714            0.14911               0.99911
3                    -0.15993            0.14252               0.99716
4                    -0.08745            0.11243               0.99069
…                        …                  …                     …
3084                 -0.08683            0.10809               0.99710
3085                 -0.07364            0.09253               0.98648
3086                 -0.06074            0.11204               0.99479
3087                 -0.06076            0.11592               0.99708
3088                 -0.04609            0.11927               0.99730


       volunteering_rate_county  civic_organizations_county
0                       0.04355                     0.01518
1                       0.06117                     0.01526
2                       0.02093                     0.01474
3                       0.05294                     0.01439
4                       0.05704                     0.01724
…                           …                         …
3084                    0.07321                     0.01225
3085                    0.09747                     0.03223
3086                    0.06942                     0.01222
3087                    0.05843                     0.03512
3088                    0.13635                     0.02375
```
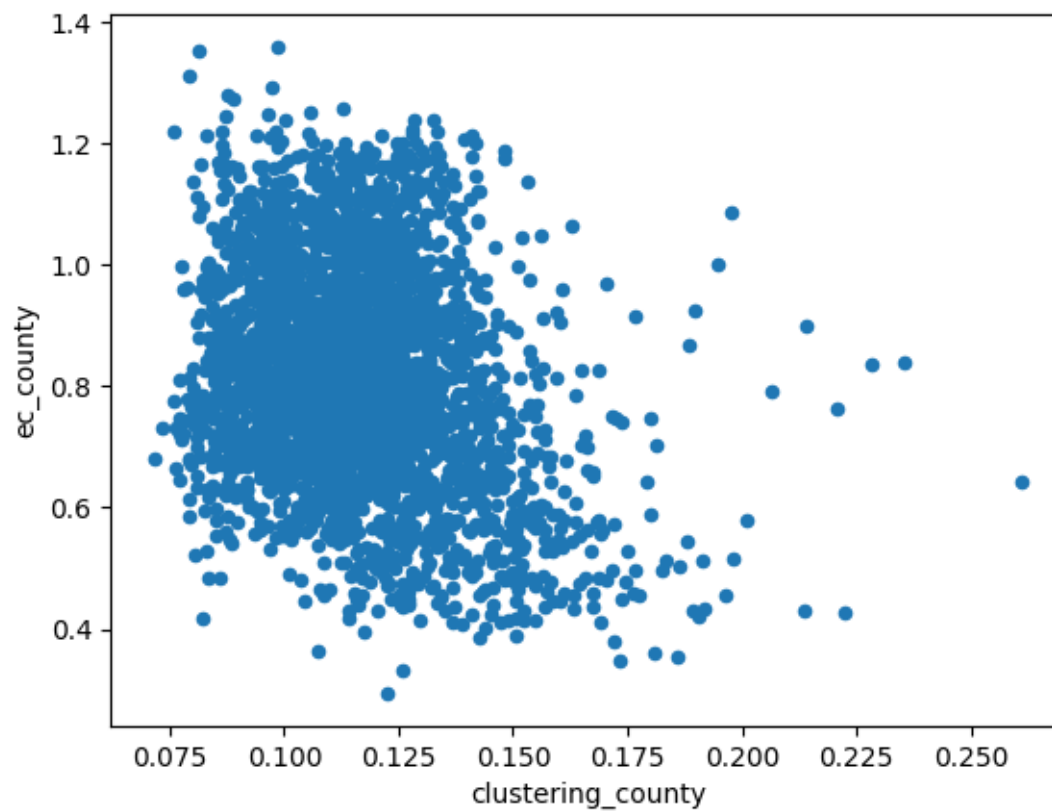
```
[3089 rows x 26 columns]
```

[ ]: `df['county_name'].nunique()`

[ ]: 3089

[ ]:
```python
# list(df.columns)
df.columns
```

[ ]:
```
Index(['county', 'county_name', 'num_below_p50', 'pop2018', 'ec_county',
       'ec_se_county', 'child_ec_county', 'child_ec_se_county',
       'ec_grp_mem_county', 'ec_high_county', 'ec_high_se_county',
       'child_high_ec_county', 'child_high_ec_se_county',
       'ec_grp_mem_high_county', 'exposure_grp_mem_county',
       'exposure_grp_mem_high_county', 'child_exposure_county',
       'child_high_exposure_county', 'bias_grp_mem_county',
       'bias_grp_mem_high_county', 'child_bias_county',
       'child_high_bias_county', 'clustering_county', 'support_ratio_county',
       'volunteering_rate_county', 'civic_organizations_county'],
      dtype='object')
```
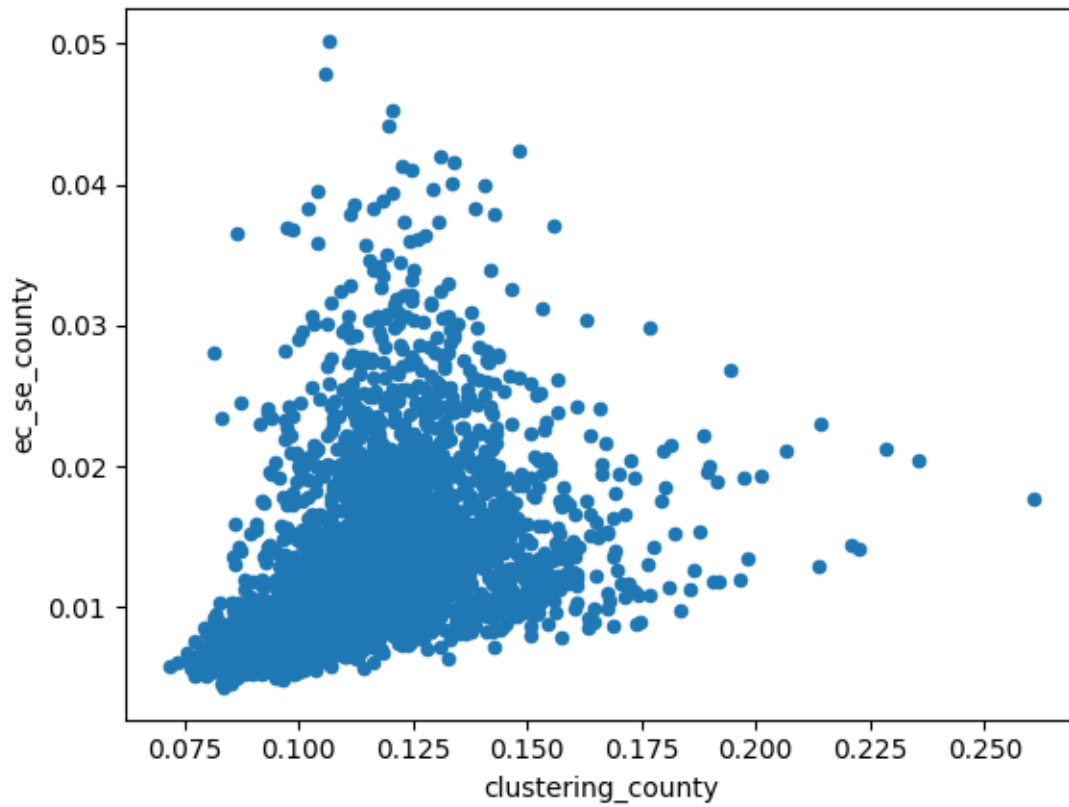
[ ]: `df.plot(x='clustering_county', y='ec_county', kind='scatter')`

[ ]: `<AxesSubplot:xlabel='clustering_county', ylabel='ec_county'>`

```
df.plot(x='clustering_county', y='ec_se_county', kind='scatter')
```

```
<AxesSubplot:xlabel='clustering_county', ylabel='ec_se_county'>
```

```
[ ]: df.plot(x='clustering_county', y='volunteering_rate_county', kind='scatter')
```

```
[ ]: <AxesSubplot:xlabel='clustering_county', ylabel='volunteering_rate_county'>
```