

## PA\_jupyter

April 9, 2021

```
[29]: import pandas as pd
import numpy as np
from tqdm import tqdm
```

```
[30]: at = pd.read_csv("PA_at.txt")
      pn = pd.read_csv("PA_pn.txt")
```

```
[31]: matr = pd.DataFrame(np.zeros((at.shape[0], at.shape[0]), dtype=bool),
    ↪ columns=at["GEOID10"])
at_concat = pd.concat([at, matr], axis=1)
ind = at_concat.index
```

```
[32]: for index, row in tqdm(pn.iterrows()):
      index1 = ind[at_concat["GEOID10"] == row["src_GEOID10"]]
      at_concat.at[index1[0], str(row["nbr_GEOID10"])] = True
```

```
55650it [13:32, 68.47it/s]
```

```
[33]: at_concat
```

[33]:	OID_	STATEFP10	COUNTYFP10	VTDST10	GEOID10	VTDI10	\
0	0	42	85	960	42085960	A	
1	1	42	39	40	4203940	A	
2	2	42	39	10	4203910	A	
3	3	42	39	20	4203920	A	
4	4	42	39	30	4203930	A	
...	...	...	...	...	...		
9250	9250	42	1	100	42001100	A	
9251	9251	42	1	480	42001480	A	
9252	9252	42	1	260	42001260	A	
9253	9253	42	1	10	4200110	A	
9254	9254	42	1	40	4200140	A	

	NAME10	NAMELSAD10	LSAD10	\
0	SHENANGO TWP VTD WEST	SHENANGO TWP VTD WEST	00	
1	BLOOMING VALLEY Voting District	BLOOMING VALLEY Voting District	00	
2	ATHENS TWP Voting District	ATHENS TWP Voting District	00	

3	BEAVER TWP Voting District	BEAVER TWP Voting District	00
4	BLOOMFIELD TWP Voting District	BLOOMFIELD TWP Voting District	00
...	...	...	...
9250	CONEWAGO TWP VTD 02	CONEWAGO TWP VTD 02	00
9251	UNION TWP	UNION TWP Voting District	V2
9252	HAMILTON TWP	HAMILTON TWP Voting District	V2
9253	ABBOTTSTOWN	ABBOTTSTOWN Voting District	V2
9254	BERWICK TWP	BERWICK TWP Voting District	V2

	MTFCC10	...	42001110	42001230	4200190	42001425	42001400	42001100	\
0	G5240	...	False	False	False	False	False	False	
1	G5240	...	False	False	False	False	False	False	
2	G5240	...	False	False	False	False	False	False	
3	G5240	...	False	False	False	False	False	False	
4	G5240	...	False	False	False	False	False	False	
...	...	...	...	...	...	...	...	...	
9250	G5240	...	False	False	True	True	True	False	
9251	G5240	...	False	False	False	False	True	True	
9252	G5240	...	False	False	False	False	True	False	
9253	G5240	...	False	False	False	False	False	False	
9254	G5240	...	False	False	False	True	False	True	

	42001480	42001260	4200110	4200140
0	False	False	False	False
1	False	False	False	False
2	False	False	False	False
3	False	False	False	False
4	False	False	False	False
...	...	...	...	...
9250	True	False	False	True
9251	False	False	False	False
9252	False	False	True	True
9253	False	True	False	True
9254	False	True	True	False

[9255 rows x 9324 columns]

```
[35]: at_concat.to_csv("PA_final.csv")
```