merge code

November 18, 2024

```python
[1]: import pandas as pd
```

```python
[7]: df1 = pd.read_csv('Children_in_each_neighborhood.csv')
     df2 = pd.read_csv('Single_parents_in_each_neighborhood.csv')
     df3 = pd.read_csv('income.csv')
     df4 = pd.read_csv('bachelors.csv')
     df1
```

```
[7]:    postal_code                                          data  \
     0          M1B  2021A0011M1B - Children - Counts - Total
     1          M9V  2021A0011M9V - Children - Counts - Total
     2          M2J  2021A0011M2J - Children - Counts - Total
     3          M2N  2021A0011M2N - Children - Counts - Total
     4          M1E  2021A0011M1E - Children - Counts - Total
     ..         ...                                       ...
     91         M5J  2021A0011M5J - Children - Counts - Total
     92         M5G  2021A0011M5G - Children - Counts - Total
     93         M5E  2021A0011M5E - Children - Counts - Total
     94         M5C  2021A0011M5C - Children - Counts - Total
     95         M5H  2021A0011M5H - Children - Counts - Total

         Children in each neighbor  Children Points
     0                       24745               96
     1                       20320               95
     2                       17845               94
     3                       17785               93
     4                       16850               92
     ..                        ...              ...
     91                       1775                5
     92                       1315                4
     93                       1145                3
     94                        355                2
     95                        280                1

     [96 rows x 4 columns]
```

```python
[8]: df2
```

```
[8]:     postal_code                                                data  \
     0           M1B  2021A0011M1B - Total one-parent families - Cou…
     1           M3N  2021A0011M3N - Total one-parent families - Cou…
     2           M9V  2021A0011M9V - Total one-parent families - Cou…
     3           M6M  2021A0011M6M - Total one-parent families - Cou…
     4           M1E  2021A0011M1E - Total one-parent families - Cou…
     ..          …                                                …
     91          M5G  2021A0011M5G - Total one-parent families - Cou…
     92          M4T  2021A0011M4T - Total one-parent families - Cou…
     93          M5E  2021A0011M5E - Total one-parent families - Cou…
     94          M5C  2021A0011M5C - Total one-parent families - Cou…
     95          M5H  2021A0011M5H - Total one-parent families - Cou…

         Single parents  Single parents Points
     0             4590                     96
     1             4520                     95
     2             3925                     94
     3             3840                     93
     4             3520                     92
     ..             …                       …
     91             325                      5
     92             315                      4
     93             230                      3
     94              95                      2
     95              45                      1

     [96 rows x 4 columns]

[9]: df3

[9]:     Unnamed: 0 postal_code                                           data  \
     0           56          M5E  2021A0011M5E - Median after-tax income in 2020…
     1           83          M8X  2021A0011M8X - Median after-tax income in 2020…
     2           48          M4T  2021A0011M4T - Median after-tax income in 2020…
     3           44          M4N  2021A0011M4N - Median after-tax income in 2020…
     4           38          M4G  2021A0011M4G - Median after-tax income in 2020…
     ..          …           …                                                 …
     91          94          M9V  2021A0011M9V - Median after-tax income in 2020…
     92           3          M1G  2021A0011M1G - Median after-tax income in 2020…
     93          33          M3N  2021A0011M3N - Median after-tax income in 2020…
     94          14          M1V  2021A0011M1V - Median after-tax income in 2020…
     95          39          M4H  2021A0011M4H - Median after-tax income in 2020…

         After-tax Income  After-tax Income Rank Score
     0             56800                           96
     1             56800                           96
     2             56400                           94
```

```
3               54400                    93
4               54000                    92
..                 …                       …
91              29400                     6
92              29200                     4
93              28400                     3
94              27400                     2
95              27000                     1

[96 rows x 5 columns]
```

[10]: `df4`

```
[10]:     Unnamed: 0 postal_code                                     data  \
      0           22         M2N  2021A0011M2N - Bachelor's degree or higher - C…
      1           66         M5V  2021A0011M5V - Bachelor's degree or higher - C…
      2           18         M2J  2021A0011M2J - Bachelor's degree or higher - C…
      3           53         M5A  2021A0011M5A - Bachelor's degree or higher - C…
      4           52         M4Y  2021A0011M4Y - Bachelor's degree or higher - C…
      ..          …           …                                              …
      91          31         M3L  2021A0011M3L - Bachelor's degree or higher - C…
      92          58         M5H  2021A0011M5H - Bachelor's degree or higher - C…
      93          30         M3K  2021A0011M3K - Bachelor's degree or higher - C…
      94          89         M9L  2021A0011M9L - Bachelor's degree or higher - C…
      95          55         M5C  2021A0011M5C - Bachelor's degree or higher - C…

          Number of bachlors degreess  Education Score
      0                         39350               96
      1                         39245               95
      2                         24985               94
      3                         21690               93
      4                         20815               92
      ..                          …                …
      91                         2380                5
      92                         2270                4
      93                         1965                3
      94                         1960                2
      95                         1770                1

      [96 rows x 5 columns]
```

[12]:
```python
result = pd.merge(df1, df2, on='postal_code', how='outer', suffixes=('_df1',
 '_df2'))
result = pd.merge(result, df3, on='postal_code', how='outer', suffixes=('',
 '_df3'))
result = pd.merge(result, df4, on='postal_code', how='outer', suffixes=('',
 '_df4'))
```

```
[13]: result
```

```
[13]:     postal_code                                    data_df1  \
      0          M1B  2021A0011M1B - Children - Counts - Total
      1          M9V  2021A0011M9V - Children - Counts - Total
      2          M2J  2021A0011M2J - Children - Counts - Total
      3          M2N  2021A0011M2N - Children - Counts - Total
      4          M1E  2021A0011M1E - Children - Counts - Total
      ..         ...                                       ...
      91         M5J  2021A0011M5J - Children - Counts - Total
      92         M5G  2021A0011M5G - Children - Counts - Total
      93         M5E  2021A0011M5E - Children - Counts - Total
      94         M5C  2021A0011M5C - Children - Counts - Total
      95         M5H  2021A0011M5H - Children - Counts - Total

          Children in each neighbor  Children Points  \
      0                       24745               96
      1                       20320               95
      2                       17845               94
      3                       17785               93
      4                       16850               92
      ..                        ...              ...
      91                       1775                5
      92                       1315                4
      93                       1145                3
      94                        355                2
      95                        280                1

                                              data_df2  Single parents  \
      0   2021A0011M1B - Total one-parent families - Cou…            4590
      1   2021A0011M9V - Total one-parent families - Cou…            3925
      2   2021A0011M2J - Total one-parent families - Cou…            3295
      3   2021A0011M2N - Total one-parent families - Cou…            3355
      4   2021A0011M1E - Total one-parent families - Cou…            3520
      ..                                              ...             ...
      91  2021A0011M5J - Total one-parent families - Cou…             365
      92  2021A0011M5G - Total one-parent families - Cou…             325
      93  2021A0011M5E - Total one-parent families - Cou…             230
      94  2021A0011M5C - Total one-parent families - Cou…              95
      95  2021A0011M5H - Total one-parent families - Cou…              45

          Single parents Points  Unnamed: 0  \
      0                      96           0
      1                      94          94
      2                      89          18
      3                      90          22
      4                      92           2
```

..	…	…
91	8	59
92	5	57
93	3	56
94	2	55
95	1	58

	data	After-tax Income \
0	2021A0011M1B – Median after-tax income in 2020…	31600
1	2021A0011M9V – Median after-tax income in 2020…	29400
2	2021A0011M2J – Median after-tax income in 2020…	33200
3	2021A0011M2N – Median after-tax income in 2020…	36400
4	2021A0011M1E – Median after-tax income in 2020…	32800
..	…	…
91	2021A0011M5J – Median after-tax income in 2020…	54000
92	2021A0011M5G – Median after-tax income in 2020…	40000
93	2021A0011M5E – Median after-tax income in 2020…	56800
94	2021A0011M5C – Median after-tax income in 2020…	51600
95	2021A0011M5H – Median after-tax income in 2020…	52000

	After-tax Income Rank Score	Unnamed: 0_df4 \
0	19	0
1	6	94
2	35	18
3	47	22
4	33	2
..	…	…
91	92	59
92	60	57
93	96	56
94	85	55
95	87	58

	data_df4 \
0	2021A0011M1B – Bachelor's degree or higher – C…
1	2021A0011M9V – Bachelor's degree or higher – C…
2	2021A0011M2J – Bachelor's degree or higher – C…
3	2021A0011M2N – Bachelor's degree or higher – C…
4	2021A0011M1E – Bachelor's degree or higher – C…
..	…
91	2021A0011M5J – Bachelor's degree or higher – C…
92	2021A0011M5G – Bachelor's degree or higher – C…
93	2021A0011M5E – Bachelor's degree or higher – C…
94	2021A0011M5C – Bachelor's degree or higher – C…
95	2021A0011M5H – Bachelor's degree or higher – C…

Number of bachlors degreess Education Score

```
0                    14160         82
1                     9715         52
2                    24985         94
3                    39350         96
4                    11120         62
..                     ...        ...
91                   11410         65
92                    6220         22
93                    8005         39
94                    1770          1
95                    2270          4

[96 rows x 15 columns]
```

[14]: ```python
result.to_csv('merge.csv')
```

[ ]: