Socio-Economical Analysis of Oslo's Districts

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DATA

List of boroughs of Oslo

From Wikipedia, the free encyclopedia

The 15 **boroughs of Oslo** were created on 1 January 2004. They each have an elected local council with limited responsibilities.[1]

Borough	Residents	Area	Number
Alna	49 801	13,7 km^2	12
Bjerke	33 422	7,7 km^2	9
Frogner	59 269	8,3 km^2	5
Gamle Oslo	58 671	7,5 km^2	1
Grorud	27 707	8,2 km^2	10
Grünerløkka	62 423	4,8 km^2	2
Nordre Aker	52 327	13,6 km^2	8
Nordstrand	52 459	16,9 km^2	14
Sagene	45 089	3,1 km^2	3
St. Hanshaugen	38 945	3,6 km^2	4
Stovner	33 316	8,2 km^2	11
Søndre Nordstrand	39 066	18,4 km^2	15
Ullern	34 596	9,4 km^2	6
Vestre Aker	50 157	16,6 km^2	7
Østensjø	50 806	12,2 km^2	13

METHODOLOGY

Importing the libraries

In [134]:
```
import numpy as np

import pandas as pd
pd.set_option('display.max_columns', None)
pd.set_option('display.max_rows', None)

import json as json

import requests # library to handle requests
from  bs4 import BeautifulSoup #webscrapping library

from pandas import json_normalize


from sklearn.cluster import KMeans

import folium # map rendering library

print('Libraries imported.')
```

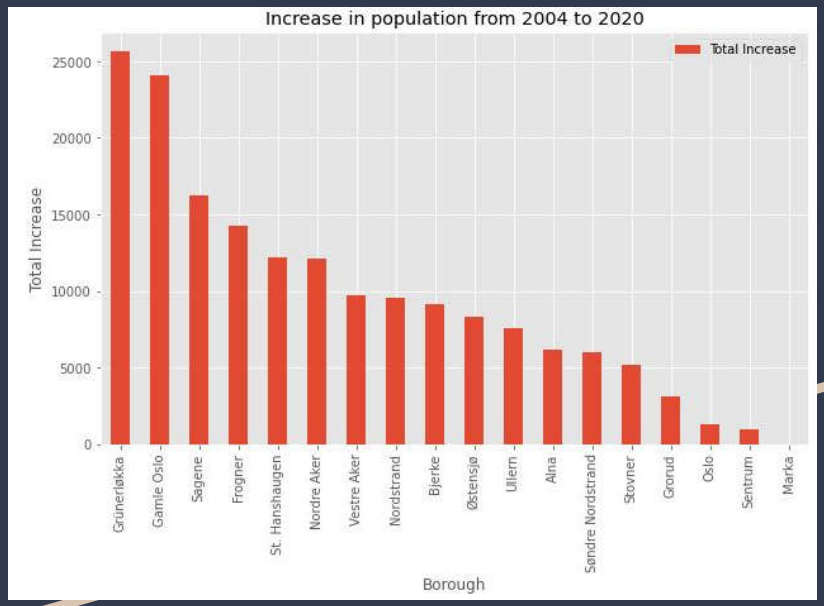
```
Libraries imported.
```

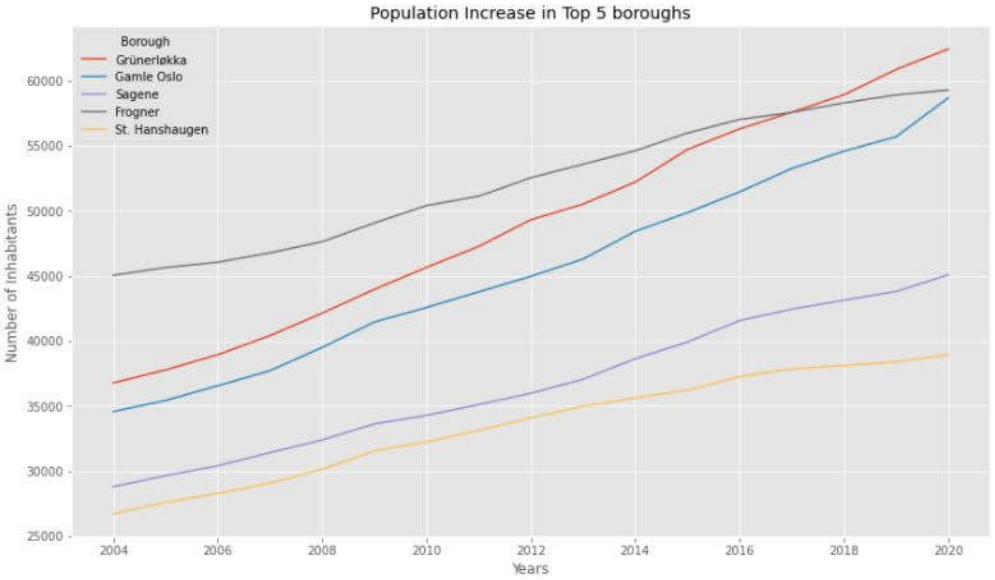
```
#Loop trough all the columns and years that need to remove the locked space, define in list 'years'

y = 0
x = 0
all_years = ['2004', '2005', '2006', '2007', '2008', '2009', '2010', '2011', '2012', '2013', '2014', '2

while x < 17:

        y = 0 #reset y
        while y < 18:

            df_tot[all_years[x]][y] = re.sub(r'\xa0', '', df_tot[all_years[x]][y])
            df_tot[all_years[x]][y]

            y = y + 1

        x = x + 1
```

```
#test of the dtype for values under the index [x]
result = df_tot['2004'][2] + df_tot['2004'][3]
result
```

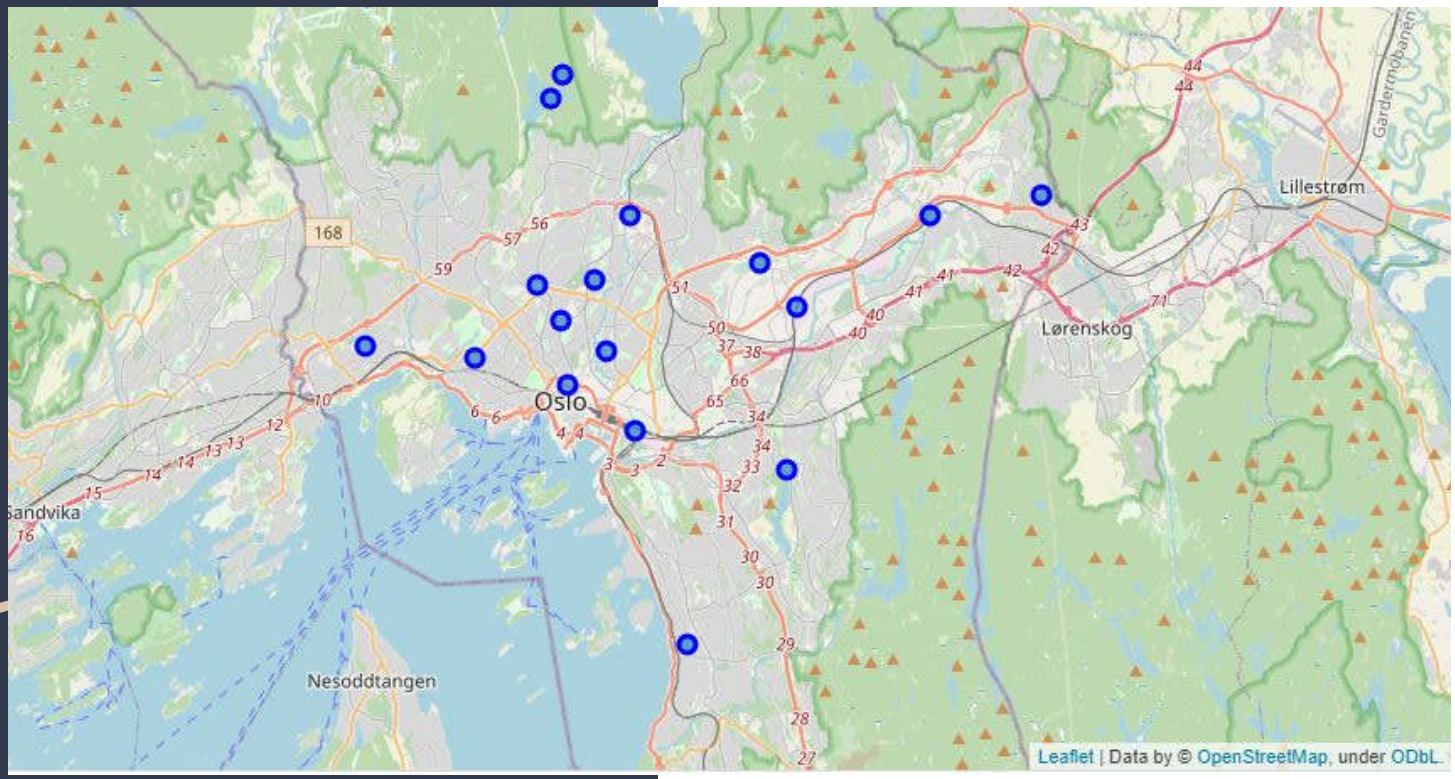
```
'28\xa081626\xa0728'
```

PLOTTING


Increase in population from 2004 to 2020
Total Increase
Total Increase
25000
20000
15000
10000
5000
0
Grünerløkka
Gamle Oslo
Sagene
Frogner
St. Hanshaugen
Nordre Aker
Vestre Aker
Nordstrand
Bjerke
Østensjø
Ullern
Alna
Søndre Nordstrand
Stovner
Grorud
Oslo
Sentrum
Marka
Borough


Population Increase in Top 5 boroughs
Borough
Grünerløkka
Gamle Oslo
Sagene
Frogner
St. Hanshaugen
Number of Inhabitants
60000
55000
50000
45000
40000
35000
30000
25000
2004
2006
2008
2010
2012
2014
2016
2018
2020
Years

VISUALIZATION



CLUSTERING