

The Battle of West African Neighborhoods Lagos and Accra

Battle of West African Cities

LAGOS



ACCRA



Data Set Required

- ❖ Lagos is divided into 20 Local government area (LGA) 4 among those 20 LGAs are classified under non-metropolitan Lagos State, while the other 16 make up the city of Lagos.
- ❖ Data regarding this information about Lagos is found on postcode.com.ng
- ❖ Geopy library is used to get the latitude and longitude values of Lagos Nigeria
- ❖ In total, 161 rows and 5 features in the raw dataset.

lagos_data

| | Neighborhood | Postcode | Area | Latitude | Longitude |
|-----|---------------------|----------|------------------------|----------|-----------|
| 0 | Abarenji | 100269 | Metropolitan Lagos | 6.454700 | 3.388760 |
| 1 | Abule Egba | 100276 | Metropolitan Lagos | 6.647500 | 3.303060 |
| 2 | Abule Ijesha | 100213 | Metropolitan Lagos | 6.524720 | 3.386390 |
| 3 | Abule Okuta | 100223 | Metropolitan Lagos | 6.539930 | 3.392800 |
| 4 | Adeniji Adele | 101226 | Metropolitan Lagos | 6.464518 | 3.395396 |
| ... | ... | ... | ... | ... | ... |
| 156 | Erodo | 106103 | Non-Metropolitan Lagos | 6.640680 | 3.990410 |
| 157 | Ibeju | 105101 | Non-Metropolitan Lagos | 6.487010 | 3.892810 |
| 158 | Lekki | 105102 | Non-Metropolitan Lagos | 6.409480 | 4.091520 |
| 159 | Ikorodu rural areas | 104101 | Non-Metropolitan Lagos | 6.623560 | 3.504830 |
| 160 | Irepodun | 104102 | Non-Metropolitan Lagos | 6.683795 | 3.308795 |

Accra Dataset

- ❖ Accra is divided in planned, unplanned and slums neighbourhood
- ❖ Accra Data scraped from https://en.wikipedia.org/wiki/Neighborhoods_of_Accra
- ❖ Geopy library is used to get the latitude and longitude values of Accra Ghana
- ❖ In total, 62 rows and 4 features in the raw dataset.

accra_data

| | Neighborhoods | Area | Latitude | Longitude |
|-----|---------------|-----------|----------|-----------|
| 0 | Victoriaborg | Planned | 5.549280 | -0.197150 |
| 1 | East Ridge | Planned | 5.549940 | -0.200135 |
| 2 | West Ridge | Planned | 5.549940 | -0.200135 |
| 3 | North Ridge | Planned | 5.572300 | -0.196190 |
| 4 | Adabraka | Planned | 5.578880 | -0.232610 |
| ... | ... | ... | ... | ... |
| 57 | Mantseman | Unplanned | 5.213030 | -1.062310 |
| 58 | Abossey Okai | Unplanned | 5.553380 | -0.223934 |
| 59 | Apenkwa | Unplanned | 5.600430 | -0.233120 |
| 60 | Bubiashie | Unplanned | 5.574561 | -0.248072 |
| 61 | Mpoase | Unplanned | 5.542343 | -0.243245 |

Top 10 Most Common venues in Lagos Nigeria

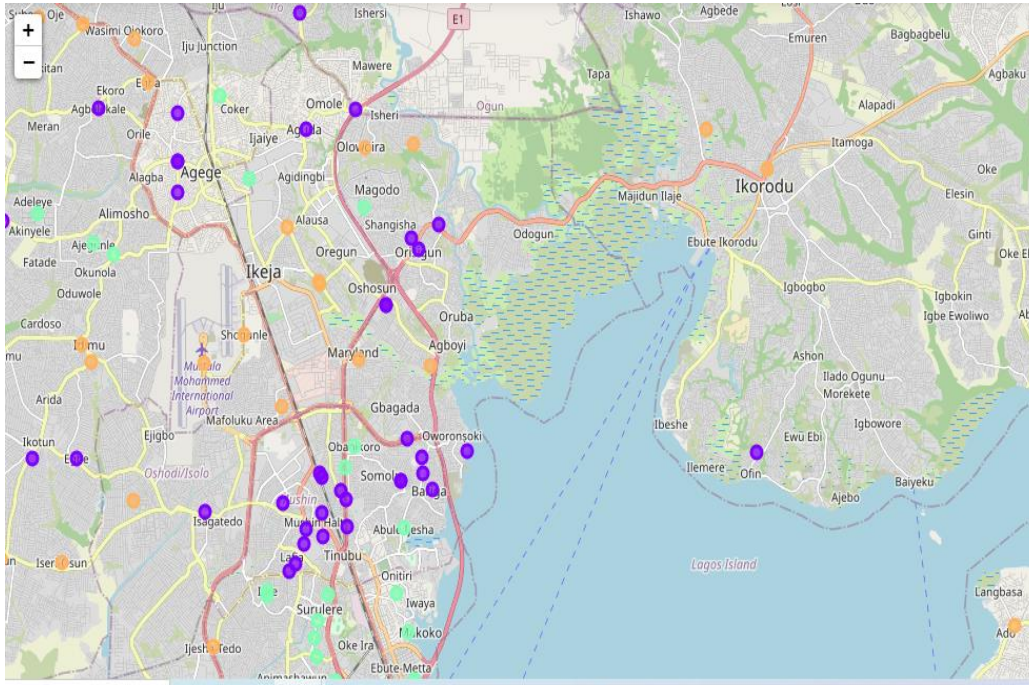
| | Neighborhood | Postcode | Area | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue | 7th Most Common Venue |
|---|---------------|----------|--------------------|----------|-----------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0 | Abarenji | 100269 | Metropolitan Lagos | 6.454700 | 3.388760 | 2.0 | Fast Food Restaurant | Plaza | Market | Soccer Field | Photography Studio | Automotive Shop | Park |
| 1 | Abule Egba | 100276 | Metropolitan Lagos | 6.647500 | 3.303060 | 1.0 | Hookah Bar | Light Rail Station | Farmers Market | Burger Joint | Flea Market | Diner | Fish Market |
| 2 | Abule Ijesha | 100213 | Metropolitan Lagos | 6.524720 | 3.386390 | 2.0 | Pizza Place | Arts & Entertainment | Boat or Ferry | Fast Food Restaurant | Bakery | Bagel Shop | Football Stadium |
| 3 | Abule Okuta | 100223 | Metropolitan Lagos | 6.539930 | 3.392800 | 3.0 | Pizza Place | Bus Station | Lounge | Fast Food Restaurant | Boat or Ferry | Department Store | Convenience Store |
| 4 | Adeniji Adele | 101226 | Metropolitan Lagos | 6.464518 | 3.395396 | 2.0 | Park | Fast Food Restaurant | Market | Harbor / Marina | Train Station | Automotive Shop | Pharmacy |

Top 10 Most Common venues in Accra Ghana

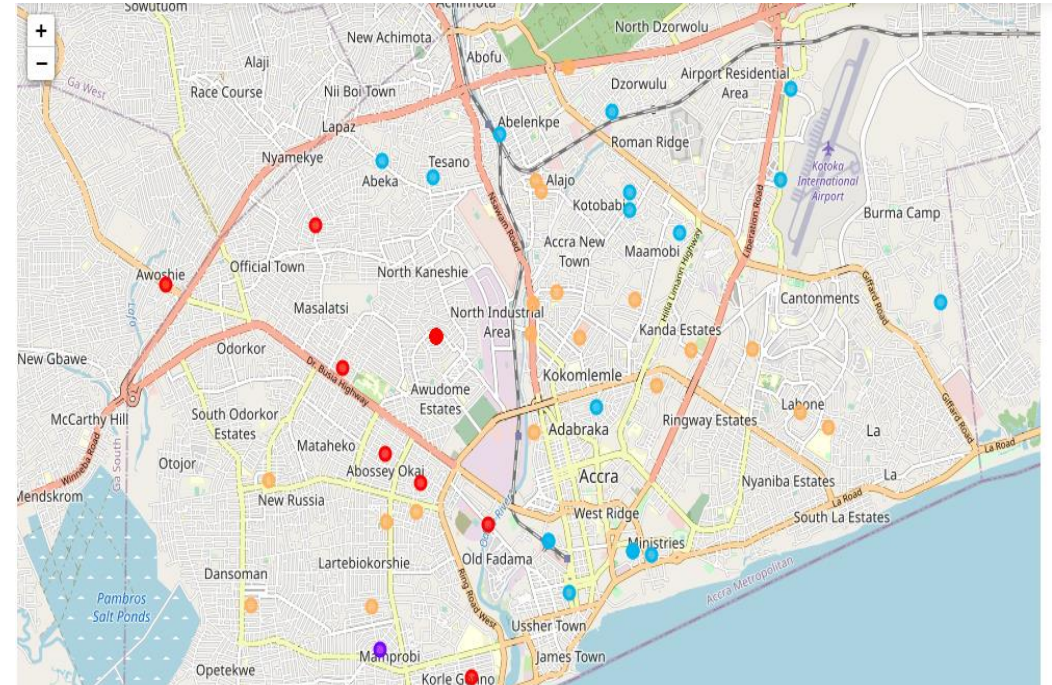
| | Neighborhoods | Area | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue | 7th Most Common Venue | 8th Most Common Venue | 9th Most Common Venue |
|---|---------------|---------|----------|-----------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0 | Victoriaborg | Planned | 5.54928 | -0.197150 | 2 | Hotel | Chinese Restaurant | Indian Restaurant | African Restaurant | Theater | Coffee Shop | Pool | Plaza | Pharmacy |
| 1 | East Ridge | Planned | 5.54994 | -0.200135 | 2 | Hotel | Chinese Restaurant | Restaurant | Indian Restaurant | Market | Pool | Plaza | Pharmacy | Park |
| 2 | West Ridge | Planned | 5.54994 | -0.200135 | 2 | Hotel | Chinese Restaurant | Restaurant | Indian Restaurant | Market | Pool | Plaza | Pharmacy | Park |
| 3 | North Ridge | Planned | 5.57230 | -0.196190 | 4 | African Restaurant | Chinese Restaurant | Hotel | Fast Food Restaurant | Bar | Pizza Place | Pub | Nightclub | Clothing Store |
| 4 | Adabraka | Planned | 5.57888 | -0.232610 | 0 | Bus Station | Soccer Field | Fast Food Restaurant | Hotel | Cosmetics Shop | Café | Casino | Pharmacy | Chinese Restaurant |

Battle of Neighborhoods

LAGOS MAP CLUSTER MAP



ACCRA MAP CLUSTER MAP



Folium library to visualize the neighborhoods in Lagos, Accra and their emerging clusters

Result and Conclusion

- ❖ *k*-means clustering algorithm was used to cluster the neighborhoods
- ❖ We analysed the neighbourhoods in the regions and tried to cluster them based on location and popular places like restaurants, hotels and other top location and nearby venues
- ❖ From the cluster arrangement from the information above for the both cities Lagos and Accra we see that Lagos is a bigger commercial city than Accra.
- ❖ Compared to Lagos, Accra is smaller with lesser activities we find hotels, fast food restaurants, bus station and African restaurants as the most popular venues in Accra.