

**PREDICTING THE PERFECT LOCATION FOR
A NEW SHOPPING MALL IN LAGOS,
NIGERIA**

BY

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As part of the final project, I've decided to explore shopping malls in Lagos, Nigeria

1. INTRODUCTION

Lagos is one of the commercial cities in Nigeria and in Africa at large with numerous business opportunities, hence this project to perfectly cite a location for a shopping mall business. It is important to note a good location for the business to be able to maximize cost effectively.

2. DATA

For this project, the data was gotten from the following

- a. Geopy - For getting the co-ordinates of different locations.
- b. Foursquare API - To get the list of venues and the details around a given location.
- c. Wikipedia - To get the Localities in Lagos using this link: https://en.wikipedia.org/wiki/List_of_Lagos_State_local_government_areas_by_population

3. METHODOLOGY AND RESULTS

First, the coordinates of the city was gotten to get the longitude and latitude, the data was gotten from Wikipedia and cleaned to display just the localities, the longitudes and latitudes of the various localities were also gotten and plotted on a map. Below is the map

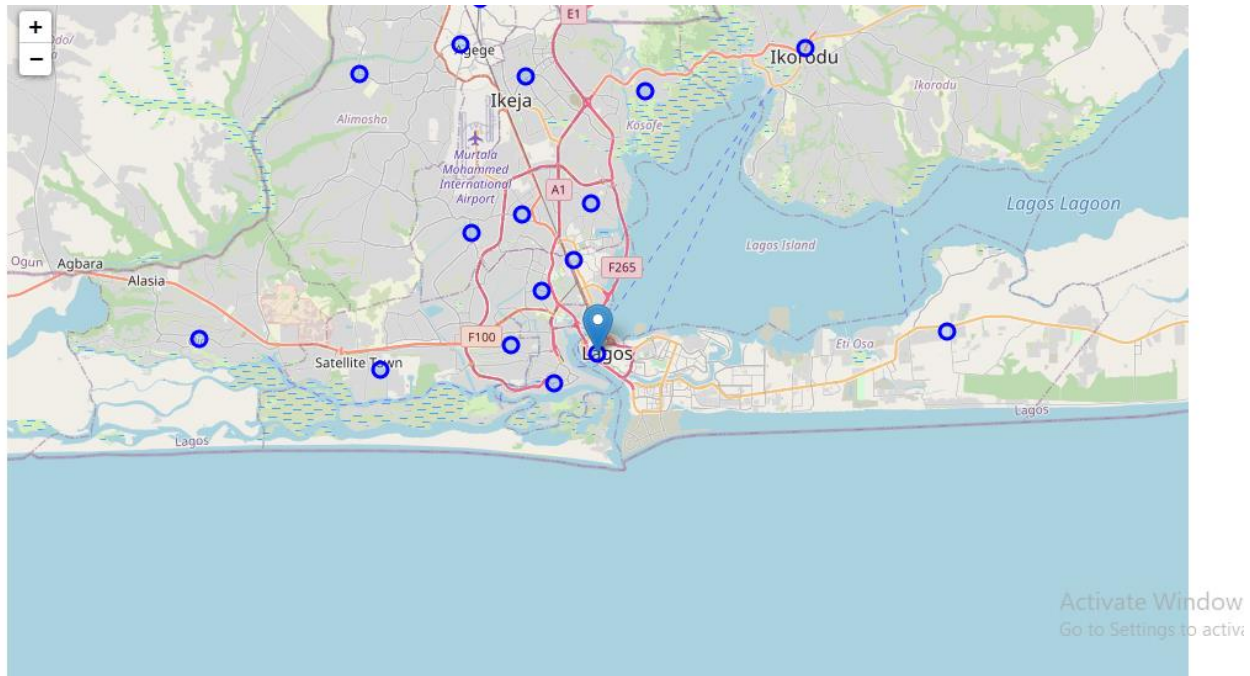


Fig 1: Map showing the different localities in Lagos

Foursquare API was used to explore and populate the various shopping malls in the target city. Kmeans clustering was the machine model used in this project because it helps in understanding of data. Clustering of the localities was done to be able to get three various clusters and were plotted on a map below

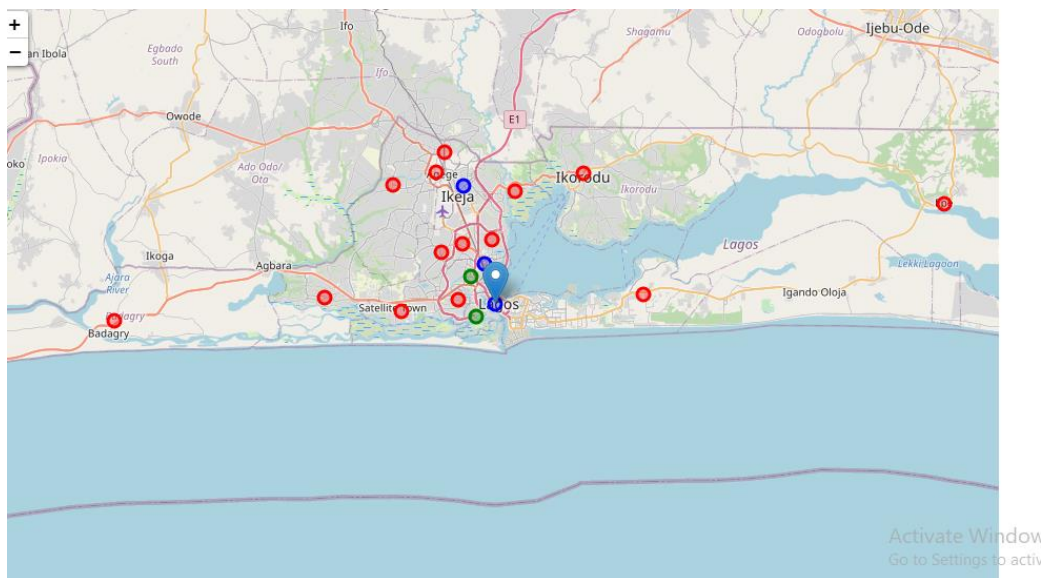


Fig 2: Map showing the three clusters (Red represents cluster 1, Green:2, Blue:3)

4. DISCUSSION

As seen in the map above, there is a concentration of shopping malls in Cluster 1 unlike cluster 2 and 3, so for someone who wants to open a new shopping mall, the cluster 2 and 3 would be good locations. The localities include: Surulere, Lagos Island, Apapa and Ikeja.

5. CONCLUSION

As mentioned in the discussion section, Cluster 2 and 3 with low concentration of shopping malls which means low competition are good locations for a new shopping mall. Someone with good business ideas can also open one in Cluster 1, since this means this demand there is high, but one should be ready for competition. Note that the accuracy of this data depends on the data provided by Foursquare.