
Comparing neighborhoods of Abidjan and Dakar

Senyo Adzimah

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1. Introduction(Business Problem)

The purpose of this project is to analyze the neighborhoods data of two western Africa cities namely Abidjan and Dakar with Data Science to see if there are any kind of similarities between them.

Abidjan is the capital city of Cote d'Ivoire (Ivory Coast) and Dakar is the capital city of Senegal. An insight of the similarities or dissimilarities can help basically tourists (to make a choice between the two cities) or those who would like to relocate in one of these cities

2. The Data

In a structured format, it was difficult to find documented at one place, neighborhoods information about Abidjan and Dakar. Particularly the localization information such as Latitude and Longitude.

We proceeded from site to site in order to collect the data on the neighborhoods and put them together in csv files (Dakar_data.csv, Abidjan_data.csv).

For instance, to collect the coordinates info, we had to search on geo-localization web pages' neighborhoods per neighborhood. This imply that scraping the web via a code couldn't help.

2.1 Abidjan neighborhoods.

The data is comprised of the neighborhoods in Abidjan. In all they are thirteen (13) and below the columns description:

1. *Neighborhoods*: The name of the neighborhoods
2. *Latitude*: The latitude of the neighborhood
3. *Longitude*: The longitude of the neighborhood

Neighborhood	Latitude	Longitude
Abobo	5.432887	-4.038892
Adjamé	5.365073	-4.023572
Yopougon	5.365073	-4.023572
Le Plateau	5.323212	-4.023689
Attécoubé	5.3362	-4.0414
Cocody	5.35	-3.9833
Koumassi	5.303	-3.9419
Marcory	5.3027	-3.9827
Port-Bouët	5.2773	-3.8859
Treichville	5.2936	-4.0083
Anyama	5.5	-4.05
Bingerville	5.35	-3.9
Songon	5.2917	-4.2454

Table 1 : Abidjan neighborhoods.

2.2 Dakar neighborhoods.

Dakar neighborhoods are in all thirteen (18) The data list the neighborhoods with:

1. *Borough*: The names of the borough
2. *Neighborhoods*: The name of the neighborhoods
3. *Latitude*: The latitude of the neighborhood
4. *Longitude*: The longitude of the neighborhood

Borough	Neighborhood	Latitude	Longitude
Almadies	Mermoz-Sacré-Cœur	14.703417	-17.474614
Almadies	Ngor	14.744162	-17.512056
Almadies	Ouakam	14.723712	-17.494233
Almadies	Yoff	14.747126	-17.490256
Dakar Plateau	Dakar-Plateau	14.67183	-17.418832
Dakar Plateau	Fann-Point E-Amitié	14.697605	-17.456508
Dakar Plateau	Gorée	14.66683	-17.392332
Dakar Plateau	Gueule Tapée-Fass-Colobane	14.673452	-17.46325
Dakar Plateau	Médina	14.6822	-17.4494
Grand Dakar	Biscuiterie	15	-17.4542
Grand Dakar	Dieuppeul-Derklé	14.725	-17.4514
Grand Dakar	Grand Dakar	14.7042	-17.4533
Grand Dakar	Hann Bel-Air	14.7103	-17.435
Grand Dakar	HLM	14.7235	-17.4433
Grand Dakar	Sicap-Liberté	14.7109	-17.461
Parcelles Assainies	Cambérène	14.7708	-17.4308
Parcelles Assainies	Grand Yoff	14.7336	-17.4494
Parcelles Assainies	Les Parcelles Assainies	14.7569	-17.4347
Parcelles Assainies	Patte d'Oie	14.745	-17.4342

Table 2: Dakar neighborhoods

2.3 Venues data.

Foursquare is a technology company that built a dataset of accurate localization data. We use its API (free) to get information about venues located in a radius of 1500 m around each neighborhoods of interest (given their latitude and longitude). Next we build a data frame out of the Json we received from the API as shown below.

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Category
0	Abobo (IC)	5.432887	-4.038892	Glacier NUMBER ONE	Gastropub
1	Adjame (IC)	5.365073	-4.023572	Black Market	Flea Market
2	Adjame (IC)	5.365073	-4.023572	Yopougon Autoroute Du Nord	Bus Station
3	Adjame (IC)	5.365073	-4.023572	Nouvelle Gare	Bus Station
4	Adjame (IC)	5.365073	-4.023572	Deport de Boisson	Brewery

Table 3: Foursquare venues categories(short list)