Determining The Best ATM Location

Business Understand

My client wants to find out the best location for planting an ATM machine to extend services to their customers. He wants to know which place is more accessible, busy and highly profitable to the organization.

In meeting the clients vision, we needed to know the factors that are considered to set up an ATM among which are:
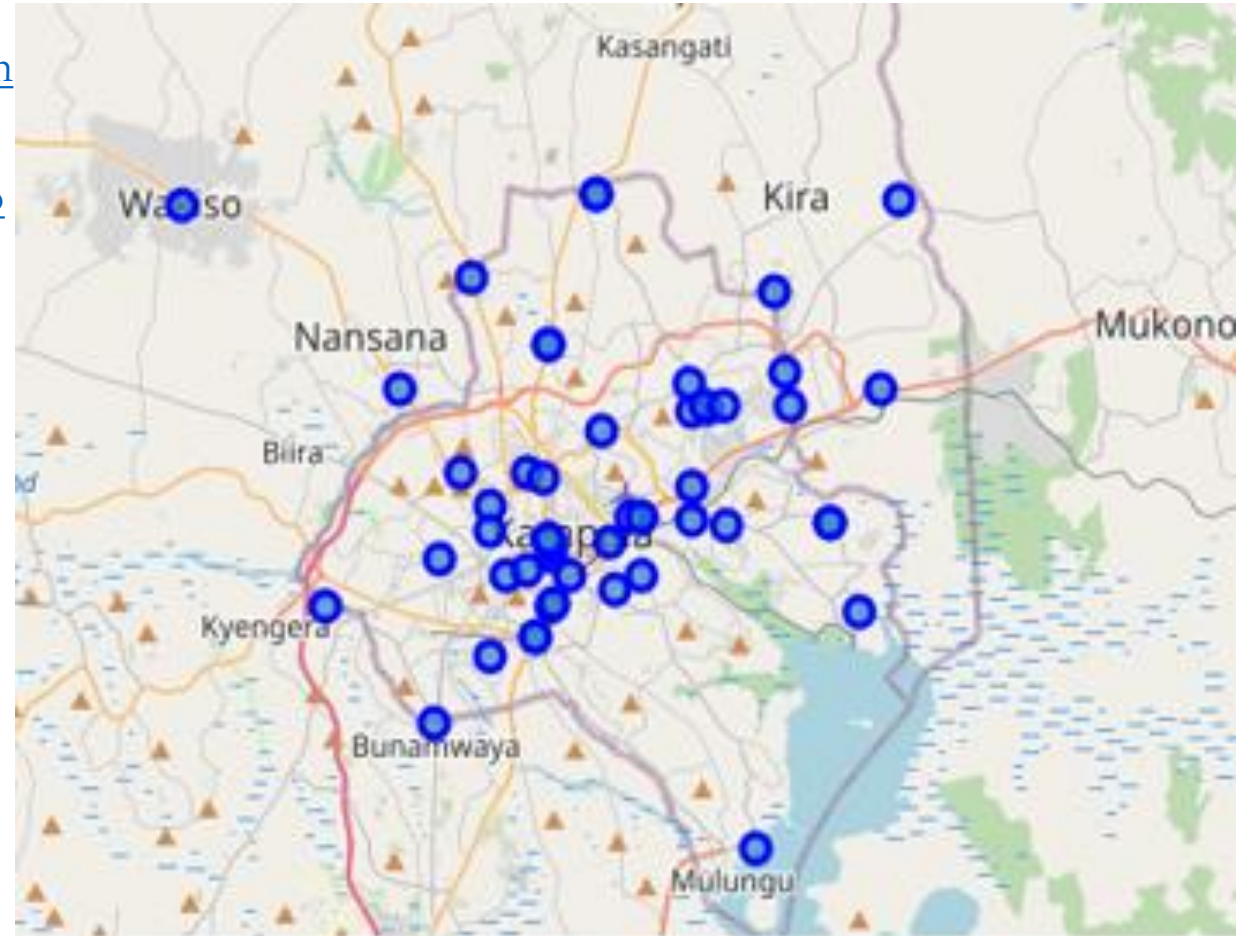
Busy place

- Distant from another bank's ATM or Branch.
- Population density of the area.

Data sampling and cleaning

- https://www.centenarybank.co.ug/index.php/branch es/index

- https://en.wikipedia.org/wiki/List_of_cities_and_to wns_in_Uganda.

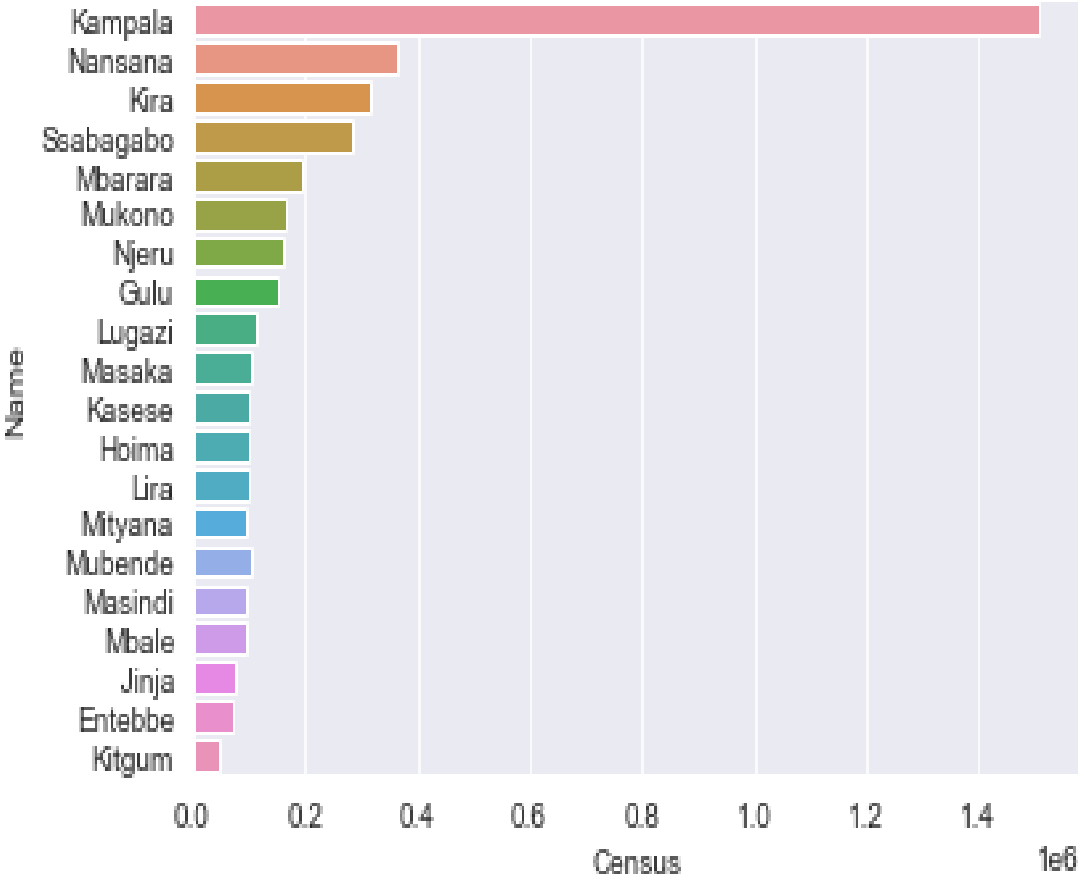|	Location	Neighborhood	Latitude	Longitude
0	Arua	Catholic Center Building, Near Christ the King...	0.315820	32.575030
1	Bugolobi	Spring Road, Middle East Hospital & shopping c...	0.319457	32.620888
2	Bugembe	Bugembe Town Council, Jinja-Iganga highway.	0.470120	33.248820
3	Busia	Busia Customs Road, Busia town	0.463070	34.105660
4	Iganga	Main Street, Iganga town	0.315820	32.575030

Data sampling and cleaning
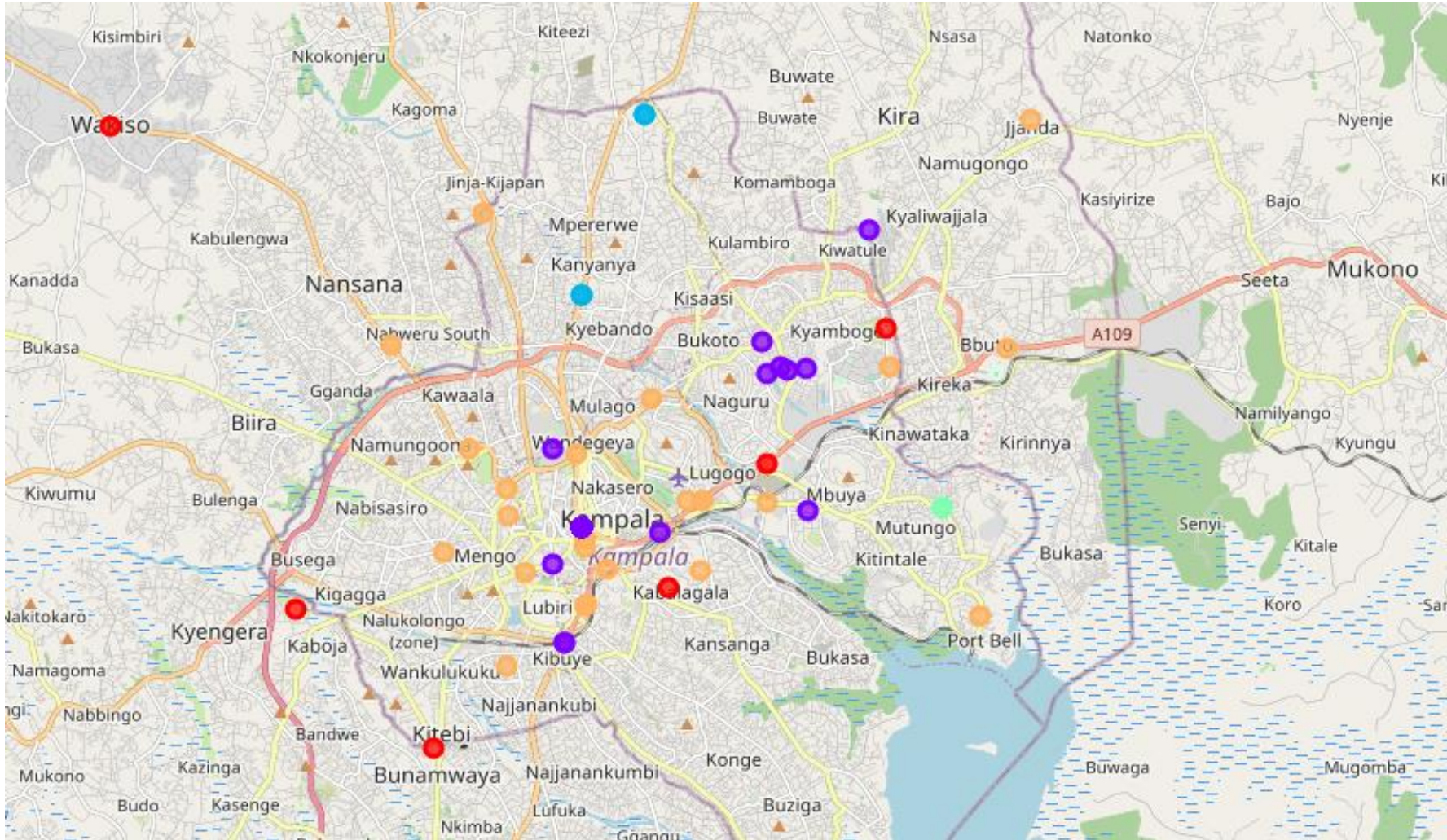
Foursquare API to locate venues

	Neighborhood	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	Andrea Olal Road Opposite Shell petrol Station	Coffee Shop	Shopping Mall	Café	Bar	Italian Restaurant	Fast Food Restaurant	Park	Art Gallery	Grocery Store
1	Angwenchibange Parish Akaidebe Zone, Parcel Do...	Coffee Shop	Shopping Mall	Café	Bar	Italian Restaurant	Fast Food Restaurant	Park	Art Gallery	Grocery Store
2	Assessment Centre, Mulago Hospital	Café	Park	Hotel Bar	Nightclub	Lounge	Chinese Restaurant	Indian Restaurant	Flea Market	Gym
3	Ben Kiwanuka Street	Park	IT Services	Coffee Shop	Mobile Phone Shop	Burger Joint	Convenience Store	Ice Cream Shop	Fast Food Restaurant	Hotel
4	Block 123, Plot 300\nMain Street, Kayunga Cent...	Post Office	Whisky Bar	Café	Chinese Restaurant	Clothing Store	Cocktail Bar	Coffee Shop	Construction & Landscaping	Convenience Store

Data Analysis

	Rank	Name	Census
0	1	Kampala	1,507,080
1	2	Nansana	365,124
2	3	Kira	317,157
3	4	Ssabagabo	283,272
4	5	Mbarara	195,531

K-mean method

Conclusion:

The best place to place an ATM is Kira