

## Introduction

One of the biggest factors when you're trying to realize your dream of opening a coffee shop business is the location that you choose. The location of a coffee shop, or just about any type of business for that matter, plays a huge role in the success of the shop. Choosing the right location is key to any good business endeavor.

For this project I choose Dubai city, Dubai one of the world's fastest growing economies with a population is estimated at around 3,400,800, Business startups take advantage of the enormous commercial prospects and innovative business modules offered by the city.

Thus, the project goal is to figure out the best locations for opening up a new coffee shop in Dubai city using the clustering technique, namely *k-Means*.

To ensure this project's success we need to look for:

- **Demographics**

We need to look into who is in the area we're considering. There are certain types of people that likely will be looking for coffee more than others. So because of this, we should look for a location that has higher populations of the kind of people we're talking about. Examples would be college students, parents, shoppers and tourists.

For this purpose I use *Foursquare API* to explore the popular venues around the location of each Community or Neighborhood of Dubai city and filter the result to get just these following category:

1. College and Universities.
2. Shopping malls.
3. Historical sites.

- **Competition**

What kind of competition there is in the area you're looking at is very important for you to know. If you open a coffee shop or other type of coffee business in an overly saturated market then the likelihood that your business will succeed will be much lower.

So using *Foursquare API* I get the coffee shop each Neighborhood of Dubai city have.

- **Neighboring venues**

Now let's talk about businesses and venues that if you're close to, it can actually help drive your sales up more, Such as Piggyback Businesses like Gyms, or venues related to Foot and car traffic and require that customers have to wait for something and venues that cater to families and having fun.

For this study I use ***Foursquare API*** to explore Dubai Neighborhoods to find these venues which will be harmonious with the coffee shop:

1. Banks.
2. Gym.
3. Parks.