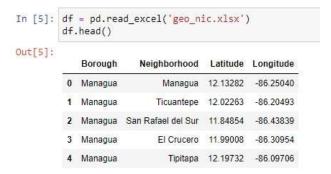
1. A description of the problem and a discussion of the background.

The computational advance in the field of data science has provided the opportunity to answer different questions from our environment using databases and machine learning models. Companies and governments invest in research in data science to improve their income statements (companies) and the well-being of their inhabitants (governments).

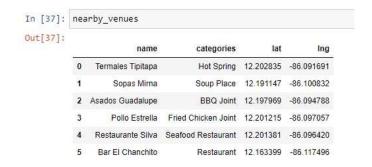
The objective of our project is to carry out a clustering of the different municipalities of Nicaragua based on the types of businesses and places of recreation found in each of the municipalities. Our project will allow public institutions to know the internal structure of each cluster to take public policy measures to guarantee the economic growth of the country. It will also allow this clusterization to be offered to private agencies with the aim of attracting private investment to the country. The private company will be able to carry out in its analysis what are the types of businesses that are in certain clusters and thus invest to complement the offer.

2. A description of the data and how it will be used to solve the problem.

Firstly, we will build a database that contains all the departments and autonomous regions of Nicaragua with each of its municipalities, in each of the municipalities we will locate their respective latitude and longitude. We will extract these data from the page https://www.geodatos.net/.



To compile business and leisure data for each municipality in Nicaragua, we will use the data provided by Foursquare.



With these data through machine learning models we can create a K-means classification algorithm to cluster the municipalities of Nicaragua and analyze the composition of each clusters. Then we will plot them on a map using Folium!