Capstone Project – The Battle of Neighbourhoods
Introduction and Business Problem

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A customer, George, has visited our headquarters with his business aspiration to open a Pizza Place in the geographical area of Athens, Greece. Athens is the capital of Greece with a population of around 5 million permanent citizens and a total of 47 municipalities. However George does not have any data of which is the most suitable municipality to open his business. Therefore, the customer asked us for our expertise in order to provide him with the best possible recommendation.

Scope

The scope of the problem is to propose to George the best municipality fit in the area of Athens in order to open his Pizza Place. In order to achieve this our company has to analyse data from the area of Athens using the Foursquare API and provide the best possible recommendation. As the customer defined in his business plan the most desirable customers in his Pizza Place will be students from Schools and Universities and office workers which either for lunch or for dinner after work will choose his restaurant.

Proposed Solution

The proposed solution is to create a scoring system for all the different municipalities of Athens based on how many schools, universities and offices this have. Furthermore, as our customer wants to choose a municipality with the lowest risk we will need to analyse also the potential competition. The scoring system it will be used it is shown on the below table:

Type of Venue	Score
Existing Pizza Place	-1
School	0.5
University	1
Office	2

In order to find the above data the Foursquare API will be used.
Furthermore, Wikipedia will be used to extract the municipalities of Athens from the following link: Athens Prefecture

The municipality with the highest score will be the one with the most possibilities of success for our customer.

Methodology and Data

The methodology of the solution is the following:

- Extract all the different municipalities of Athens and find their geographic information (latitude and longitude).
- Using Foursquare API the total amount of Pizza Places and their location will be extracted. For Pizza places the Foursquare Category ID is: 4bf58dd8d48988d1ca941735

- Using Foursquare API collect the total number of schools and their locations. For schools the Foursquare Category ID is: 4bf58dd8d48988d13b941735
- Using Foursquare API collect the total number of Universities or Colleges and their locations. For universities and colleges the Foursquare Category ID is: 4d4b7105d754a06372d81259
- Using Foursquare API collect the total amount of offices and their locations. For offices the Foursquare Category ID is: 4bf58dd8d48988d124941735

Based on the scoring rules and the data collected from Foursquare API the final score of each municipality will be calculated. The one with the highest score will be proposed to the customer.