**1. Introduction**

**1.1 Background**

A client has come to me with seed money to open a piazza shop in the Town of Oytser Bay. The Town of Oyster Bay consists of 19 villages and 17 hamlets located in Eastern Nassau County, Long Island, NY. For this exercise I will refer to the villages and hamlets as a district. The goal is to pick a district, where client can producing a better quality product at a lower price compared to other shops.

**1.2 Problem**

The project will aim to select a location based on the following criteria:

1. Area with least dense amount of pizza shops per district population.

2. Overall average rankings of piazza shops in district are lower compared to Town of Oyster Bay.

3. Average menu cost per district. The more expensive a competitors menu, better chance to undercut in price.

**2. Data**

**2.1 Sources**

foursquare.com – to obtain the number of piazza shops, reviews and average menu cost for each piazza shop in district.

[https://www.census.gov/](https://www.census.gov/data/datasets/time-series/demo/popest/2010s-total-cities-and-towns.html) - to obtain population by district base on 2019 estimates.

**2.2 Data Implementation**

A scoring technique will be used 1 (least) to 4 (best) for each of the three criteria with an equal weighting for each.

Amount of piazza shops in a district per population = District Population/Piazza Shops in District

Average amount of all piazza shops in Town of Oyster Bay = Town Population/Total Piazza Shops

piazza shops in a district per population < average = 4 (district is 25%+ less than average)

piazza shops in a district per population < average = 3 (district is 5% - 25% less than average)

piazza shops in a district per population = average = 2 (district is 5% less than average to 10% greater than average)

piazza shops in a district per population > average = 1 (district is 10%+ greater than average

Average ratings per district comparing to average rating per Oyster Bay. For the purposes of this exercise the number of ratings a shop gets was ignored. Each shop gets an equal weighting on their overall rating.

Rating 1 to 3.9 = 4

Rating 4 to 6.9 = 3

Rating 7 to 8.5 = 2

Rating 8.5+ = 1

Average menu cost ranking conversion:

Very Expensive = 4

Expensive = 3

Average = 2

Cheap = 1