Mr. Chang landing to Venice

Coursera Applied Data Science Capstone
Final Report

The Battle of Neighborhoods – LZ

Geographical context

- Venice is a city in northeastern Italy and the capital of the Veneto region.

- It is situated on a group of 118 small islands that are separated by canals and linked by over 400 bridges.The islands are located in the shallow Venetian Lagoon, an enclosed bay that lies between the mouths of the Po and the Piave rivers (more exactly between the Brenta and the Sile).

- In 2018, 260,897 people resided in the Comune di Venezia, of whom around 55,000 live in the historical city of Venice (Centro storico).

- The whole pensolon (municipality) is divided into 6 boroughs. One of these (the historic city) is divided into six areas called sestieri: Cannaregio (including San Michele), San Polo, Dorsoduro (including Giudecca and Sacca Fisola), Santa Croce, San Marco (including San Giorgio Maggiore) and Castello (including San Pietro di Castello and Sant'Elena). Each sestiere was administered by a procurator and his staff. Now, each sestiere is a statistical and historical area without any degree of autonomy. The six fingers or phalanges of the ferro on the bow of a gondola represent the six sestieri.

Introduction and Business Problem

• Mr. Chang wants to open a new Asian Restaurant in Venice (Italy).

• We help Mr. Chang to find the best place for a new Asian Restaurant.

• Venice has 6 "Sestieri" (Districts) and we aim to find the best one.

• We need to choose a Locality that has good amount of customers and low amount of competition

Data

• We will use data of Venice Sestieri from **Wikipedia**. https://en.wikipedia.org/wiki/Venice

- **Open data** are present on http://dati.venezia.it/

From **Foursquare** we will need following venues data:

- the hotels of Venice

- the Asian restaurants of Venice

- the Asian schools of Venice

- the transport service of Venice

We will determine which locality is the most appropriate in order to locate the Asian Restaurant.

We work in Venice and we will compare these results with our experience.

Will Mr. Chang's answer be correct?

Methodology

• For each sestiere we have been collected from Foursquare all venues of:

- o Hotels

- o Asian restaurants

- o Transports

- o Asian Schools

• For each of this 4 categories, a weight (or penalty) has been defined according to what Mr. Chang considers the most important.

- o Asian restaurants have been weighted with -1, since Mr. Chang wants to avoid concurrence.

- o Asian Schools have been weighted with 1, since student are good customers.

- o Transports have been weighted with 1.5, since transports are good services for his business.

- o Hotels have been weighted with 2, since tourists are even better customers.

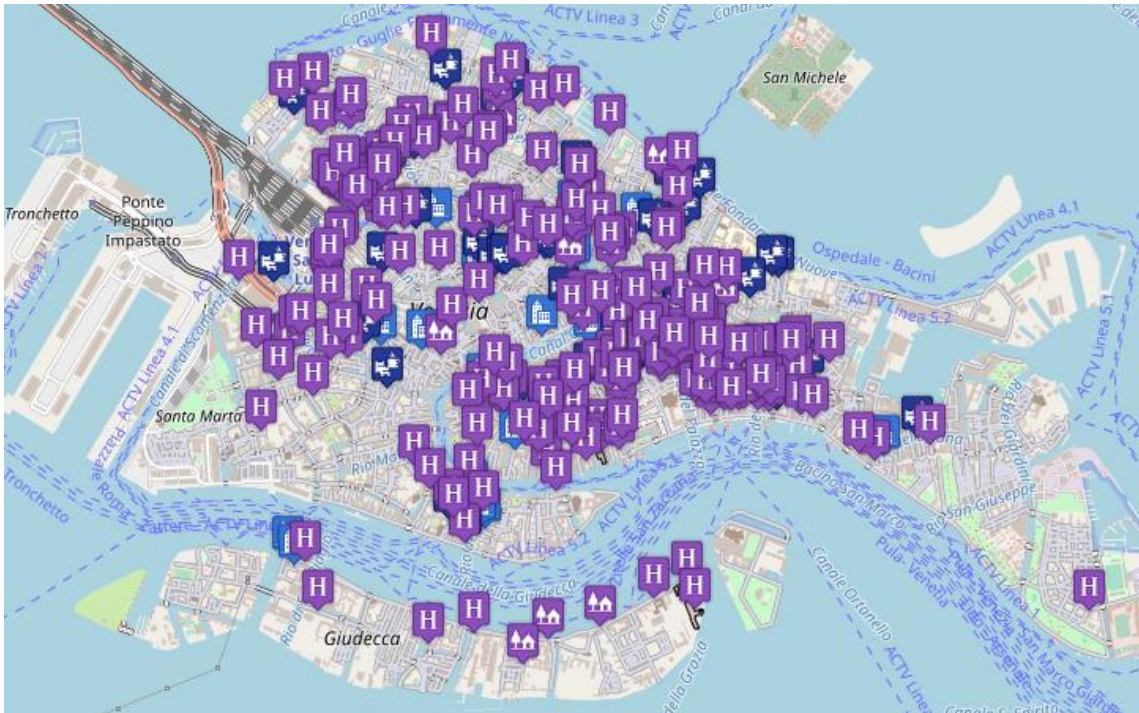The importance of each category can be modified according to Mr. Chang.

A score was computed for each sestiere as the weighted sum of the number of venues.

Sestieri of Venice

	Sestiere	Latitude	Longitude
0	Cannaregio	45.446765	12.326153
1	Castello	45.436255	12.343054
2	Dorsoduro	45.430922	12.324928
3	Santa Croce	45.441417	12.326927
4	San Marco	45.434238	12.339009
5	San Polo	45.437937	12.334652

Hotels

Asian Restourants

Transport Services

Asian Schools

Score

	Sestiere	Score
3	Santa Croce	99.7
5	San Polo	99.3
2	Dorsoduro	98.8
4	San Marco	97.6
1	Castello	96.0
0	Cannaregio	95.9

Considerations

- Santa Croce is the winner with 99.7.
- Cannaregio is the last sestiere with 95.9, with only a delta of 3.8.
- The challenge is really arduous
- In general all Venice is a good location to open Asian Restaurant.
- Mr. Chang can consider more others categories (i.e. property prices).
- For our experience, Foursquare have poor and old information of Venice.
- We can consider the inhabitants of Venice to improve our research. Information can be found on opendata http://dati.venezia.it/