



Week 5

Investing Options

Coursera Project: Battle of Neighborhoods

March 31st, 2019

AGENDA

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- A faint, light-gray network graph serves as the background for the slide. It consists of numerous small, semi-transparent circular nodes of varying sizes and thin, gray lines representing connections between them, creating a sense of a complex system or data structure.
- 1 Introduction to Business Problem
 - 2 Data and Methodology
 - 3 Analysis
 - 4 Results and Discussion

Business Problem

Introduction to Project

The underlying business problem comprises the interest of an **investor** to invest an significantly amount of money in **real-estate in Manhattan**. Moreover, he does not only want to invest but also possibly open an office space for himself in a newly acquired building. Therefore it is relevant, what kind of area the building is located in. Specifically, the investor is interested in areas which offer a lot of options regarding:

- Italian Food
- Workout Options such as Gyms, Fitness, Yoga

Within this project, I would like to strengthen the understanding of New York and its neighborhoods by not only taking a look at the different areas and venues in it, but also taking a look at the population and sale price of buildings.

The focus should be on finding out the highest real-estate sale in the past years in an area that is of interest based on its stores, restaurants and leisure activities.



Data and Methodology

Solving the business problem

To help the investor find the perfect area, the necessary Data will be very similar to the New York Neighborhood Analysis already done. We will use:

1. Foursquare API to find interesting venues
2. Geospatial data to identify boroughs and neighborhoods in New York and more specifically in Manhattan.
3. Population data to have an understanding of the number of inhabitants of each neighborhood
4. Real-estate sale transaction data to identify the most expensive building sold in the last years and to get an understanding of the pricing structure within the individual neighborhoods.

The Methodology will be a *3-Step approach*:

1. **We will replicate the New York Clustering and Segmentation Analysis to:**
 - Identify Neighborhoods in Manhattan using Geospatial Data
 - Evaluate Venues in these Neighborhoods using the Foursquare API
 - Find Neighborhoods which have the most comprehensive offering of Italian Food and Workout Options
2. Download data about NYC Population, enter it into a Panda dataframe and evaluate Neighborhood's Population in Manhattan
3. **Download data about Real-Estate Sales in the last years to:**
 - Find average selling prices per neighborhood
 - Identify the price range for our preferred neighborhood
 - Find the highest Sale in the past and what kind of building it was

This methodology will help us to identify the neighborhood which is most promising for our investor.

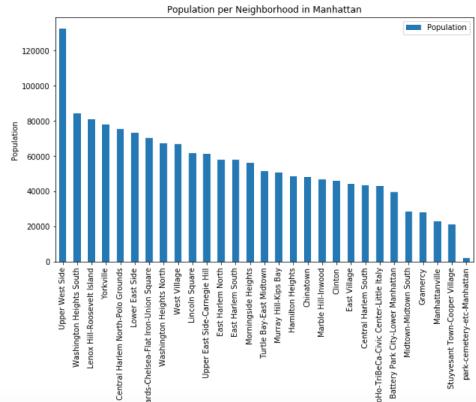
Analysis

Summary of Insights

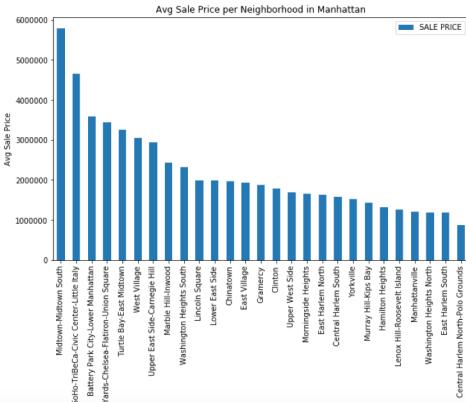
Finding the right neighborhood



Population overview



Real-estate prices



Using Geospatial Data, Foursquare API and clustering to identify favorable neighborhoods such as West Village, Tribeca, Upper East Site, etc.

Take a look at the population for these neighborhoods to avoid crowded areas.

Find the average selling price for a building in our most favorable neighborhood: West Village.

Results and Discussion

So what?

1

Promising neighborhoods based on the criteria (Italian Food & Workout Options):

- Upper East Side
- Greenwich Village
- Tribeca,
- West Village
- Civic Center
- Flatiron

2

Population in 2010:

▪ Flatiron	70.150 inhabitants
▪ West Village	66.880 inhabitants
▪ Tribeca	42.742 inhabitants
▪ Upper East Side	61.207 inhabitants

We came to the conclusion that all of these neighborhoods were good enough for us:

3

West Village would offer the best price/leisure ratio. Buildings in this area were sold for up to 323.176.471 US Dollar. Also, the sold buildings were built between 1795 and 2015.

Highest price was paid for:

- Luxury Hotel at 848 Washington Street
- Built in 2006
- Area of 219.32 square feet.

CONCLUSION: Our Investor should take a look into the West Village neighborhood and plan to invest several millions up to \$ 330.000.000!



Thanks for Reviewing!