

“A cup of coffee, please!”

— A Data-Oriented Guide to Coffee Establishment in Manhattan

Capstone Project Report, Nov 2019

Introduction

Napoleon Bonaparte once commented: ‘I would rather suffer with coffee than be senseless.’ We, the modern generation, perhaps are in a good position to understand his feeling. The unique stress of modern life often forces us to rely on the power of coffee to stay awake, to work and ‘suffer’ at the same time. Nonetheless, who could resist the temptation of a cup of hot, newly brewed coffee along with pastries after waking up from dream?

Needless to say, coffee is an indispensable part of modern life, especially for people who reside in metropolises. Given coffee’s staple drink status, coffee establishments (places that primarily sell coffee or coffee-related drink) naturally play a key role in urban residents’ life. A visit to a familiar coffee establishment in the morning can be an essential part of people’s morning routine. Students or freelancers frequently choose coffee establishments as the places for working and studying. Coffee establishments are also perfect meeting place between friends or co-workers.

Choosing a Good Coffee Establishment in Manhattan

Choosing a good coffee establishment, while may not be as serious or time-consuming as choosing a fancy restaurant, could lead to considerable happiness (or misery if not lucky) to one’s life. A little extra knowledge on where and how to look for a good coffee establishment can thus be quite valuable for every residents and visitors in a large city.

Among the cities in America, New York’s love for coffee is quite remarkable. According to a report published by WalletHub¹, the New York city boasts more coffee shops per capita than any other cities in the United State, and is ranked as the second best coffee city in America, only after Seattle.

¹ McCann, Adam, “Best Coffee Cities in America, Sep 24, 2019. Available at: <https://wallethub.com/edu/best-cities-for-coffee-lovers/23739/>

This study aims to compose a data-orient guide to the coffee establishments in Manhattan for people who current resides in New York and people who plans to visit this city in near future. Rather than trying to pick up the 'best' coffee establishment as one might do for restaurants, this guide aims to provide a detailed summary on the popularity and quality of coffee establishments in Manhattan Island and offer coffee lovers a few tips on how to choose from the numerous coffee establishments in their everyday life.

Major Tasks of this Study

To achieve our goal, this study will utilize the API of Foursquare to retrieve a complete (or nearly complete) list of coffee establishments along with their locations in Manhattan area. By making use of the premium endpoint, 'details', this study will also summarize various features of the coffee establishments, including the overall rating, the number of rating received, the price tier, number of likes, number of tips and photos. By analyzing these data, this study will aim to answer the following questions:

- Can we locate certain area(s) in Manhattan where the popularity and quality of coffee establishments are significantly better or worse than other areas in Manhattan?
- Are all the coffee establishments similar to each other? Does the price matter in determining the popularity and quality of coffee establishments? Is there any major difference between the large coffee chains such as Starbucks and the local coffee shops?
- What is the relationship between popularity and quality? Does a popular coffee establishment also serve better coffee?

I will discuss the detail procedure of acquiring the data used in this project as well as conduct some exploratory analysis in the next part of this report. Thanks for your time for reviewing my work and I would greatly appreciate any comments you might give!