1. Introduction

1.1 Background

Currently I live and work in New York City and I am amazed by the fact that I have so many different choices of food.

I'm always curious which community is best community for a food lover like me? Is there a scientific methodology for me to rank the communities by restaurant they have? Can I classify the communities by the restaurants they have?

I believe there are several factors we can consider: Diversity (How many kinds of restaurants can this community offer?), Quality (Are the food and service good?), and Price (Is the food expensive or not?).

1.2 Problem

I will rank the communities by based on my preference on the diversity, quality, price and density of the restaurants in each community.

Then I will classify these communities based on these factors, and show the classification in map.

1.3 Interests

Many people in NYC, including my friends here and I, are willing to explore the restaurants. We are curious to know which community has the best restaurants, and how do the restaurants distribute by communities.

2. Data

2.1 Data Source

For New York City neighborhood names and their locations, we still get them from the NYU Spatial Data Repository.

Then I will use 'geopy' library to get the latitude and longitude values of New York City.

Then I will utilize the Foursquare API to get the restaurants' information in these communities.

2.2 Data Cleaning

I will update his section in week 2, after I create the project.

2.3 Feature Selection

Currently I want to use the average price level, number of restaurant types and average rating as features for each community. While I may add new useful features when developing this project.