

Classifying a good BBQ Restaurant

1 Introduction

1.1 Background

Starting up a restaurant from scratch is a risky action to take as the likelihood of the restaurant failing is high due to many of the existing dominant restaurants that are in the industry already. Typically, people define a good or successful restaurant as having good food, good services, low prices, etc. The scope of this analysis will attempt to show how much this claim holds up and whether there are specific restaurant properties that hold more significance. Results of this analysis will be able to help owners who want to enter into the restaurant scene along with helping potential investors determine whether the restaurant will be a good investment to make.

1.2 Focused Area and Constraints

The specific restaurant type was chosen due to being a common restaurant type seen in most states along with the author of this project having a strong interest in this cuisine. This limited field will also help showcase common attributes and patterns easier as these restaurants will all focus on a certain type of cuisine. In addition, all restaurants acquired will be located in the USA as entry level market properties can vary between countries.

1.3 High Level Goals

1. Acquire many different BBQ restaurants located all around the USA and clean the data to include specific restaurant properties.
2. Visualize the data by showcasing each of the restaurant properties and determine if a common trend can be shown.
3. Utilize different classifying algorithms such as KNN, SVM, Random Forest, etc and measure how well our model does with existing restaurants and randomly generated ones.
4. Analyze results and determine how much of the result can be used for other types of restaurants.

2. Data Acquisitions

2.1 Data Sources

Data that will be used in this analysis will come from the Foursquare database and be obtained by making multiple POST/REQUEST calls. Since the analysis focuses on good restaurant properties, each data can be categorized in these following categories: types of food being served, location of the restaurant, price range, general comments, number of people checked in, number of likes in the restaurant, etc. To obtain these restaurants, a venue search will be done and we will be searching for venues that fall under the category of BBQ Joints. In addition, locations will be limited to the state and capital.

**States have not been chosen yet and is still in process

**Additionally, the author is unsure whether to include different variations of BBQ in the analysis or to purely keep the findings to be American BBQ.