

IBM Capstone Project Assignment

Project: Where to locate a new restaurant in Munich?

Background

Eating out is a popular pastime in Germany, with almost 51.3 million people sometimes doing so in 2019, and roughly 11.9 million people stating they often did so.¹ Many young people dream about starting their own restaurant, someday. The size of restaurant industry market is continuously increasing,

Jack lives at Munich. He has a strong interest in restaurant industry, and he has undergone a long process of training in Japan to learn how to cook Japanese cuisine. Now, he decided to start his own Japanese restaurant at Munich.

Business Problem

Munich is the capital and most populous city of Bavaria, the second most populous German state. With a population of around 1.5 million, it is the third-largest city in Germany. As a global city, Munich has a lot of restaurants that offer German, English and other continental cuisine. In these several years, with more and more drastic competition, the location of food service business will impact its success nearly as much as the menu.

Jack worries a lot about the location of his new restaurant, and he finds a market analysis agency to help him pick a district to start his new business.

Data

There are three important factors in choosing a location for Jack's new restaurant, respectively, population base, foreigner ratio and venues categories within each district.

First, the population base data is required to make sure that there are adequate people to support his business. There are 25 districts in Munich with different population density. Those area with high population density should be preferred.

Second, the ratio of foreigner data is desired to estimate the potential customers for a Japanese food. Here we assume that the higher the ratio of foreigner population, the more popular the restaurant is in that district.

Third, the venues data at each district should be analyzed to determine the competitive level of restaurant industry in that area and estimate the restaurant exposure potential to pass-by customers.

Methodology

First, descriptive statistic and data visualization will be used to get an overview of different district.

¹ Data source: <https://www.statista.com/statistics/561124/eating-out-frequency-germany/>

Second, the clustering method will be implemented to group districts into different groups for easier comparison.

Third, taking all above mentioned factors into consideration to determine the district to start the Jack's business.