

# Selecting a neighborhood to open a vegan restaurant in Berlin, Germany

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## 1. Introduction

### 1.1. Business Problem and background

#### Background

Berlin is Germany's biggest city, with a population of 3.769 million people and a population density of 3944 inhabitants per km<sup>2</sup>. The city has 12 boroughs, all very diverse and different. With around 80.000 vegans, the need for new restaurants to satisfy the high demand is paramount. With 12 boroughs and an area size of 891.1 km<sup>2</sup>, it might feel overwhelming to try and answer the questions as to where the best location to open a vegan restaurant would be and which cuisine it should have, as Berlin's food scene is just as diverse as its inhabitants.

#### Problem

We need to find out, which location would be the best to open a new vegan restaurant and which cuisine it should be. One way to achieve this goal is to use a map and information about where vegan restaurants are already located in Berlin and which venues are the most popular amongst Berliners. Another insightful information is where vegan restaurants cluster in Berlin. Based on this information, we can see which cuisine is the most popular and where the competition for vegan restaurants is the smallest.

#### Interest

New business owners who want to open vegan restaurants would be interested in the location data to have competitive advantages over their competitors and build a successful business.

## 2. Data

### 2.1 Getting geo data on Berlin

To obtain the necessary data, I web-scraped the borough information for Berlin off of Wikipedia. This information contained a few non-relevant columns, that I dropped and put the new information with borough names into a dataframe. Using the geocoder, I added latitude and longitude values for the boroughs, so that I could access venue information from Foursquare.

### 2.2 Getting restaurant information

Using the Foursquare API, I first looked at the top 100 venues in a radius of 5km of Berlin Mitte. There were 151 unique venue categories and I checked the top 5 categories per borough to see whether vegan would pop up and which venues were the most popular. While Italian was in almost all of the top 5 venues for the boroughs, vegan was not one of the top categories. So I checked the boroughs, which had vegan restaurants. The results showed that only 5 of the 12

boroughs had vegan restaurants, namely Charlottenburg-Wilmersdorf, Lichtenberg, Neukölln, Pankow and Spandau.