

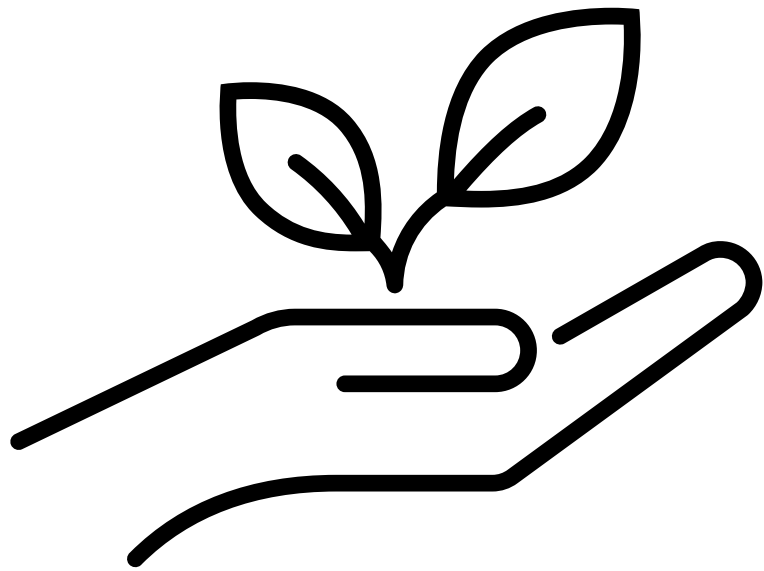
Vegan Restaurants in London -

► Overview

Peer-graded Assignment: Capstone Project - The Battle of
Neighborhoods

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IDEA:

- ▶ Having mapped out locations with the vegan restaurants could help costumers with planning their journey and even discover some new places. Very convenient for planning a meeting or a take-away. Vegans could relax and just simply enjoy the fact that they can check out everything on the menu.
- ▶ Anybody interested in the plant-based diet can use the data for planning their next order.

According to The Vegan Society's larger survey, the number of vegans quadrupled from 2014-18; in 2018 there were approximately 600,000 vegans in the UK, equivalent to 1.16% of the British population.

Background:

London currently has 152 vegan friendly restaurants and it was the first city on Happy Cow to have more than 100 completely vegan restaurants in 2017. According to a survey by finder.com, the number of vegans in the UK is set to skyrocket by 327% by 2020.





Vegan standards

As explained on the vegan society webpage (<https://www.vegansociety.com/your-business/vegan-trademark-standards>), to reduce cross contamination vegan meals should be prepared separately. Choosing a purely vegan restaurant is easier for vegans to safely enjoy their food. Regarding that most of the restaurants offer some sort of plant base options.

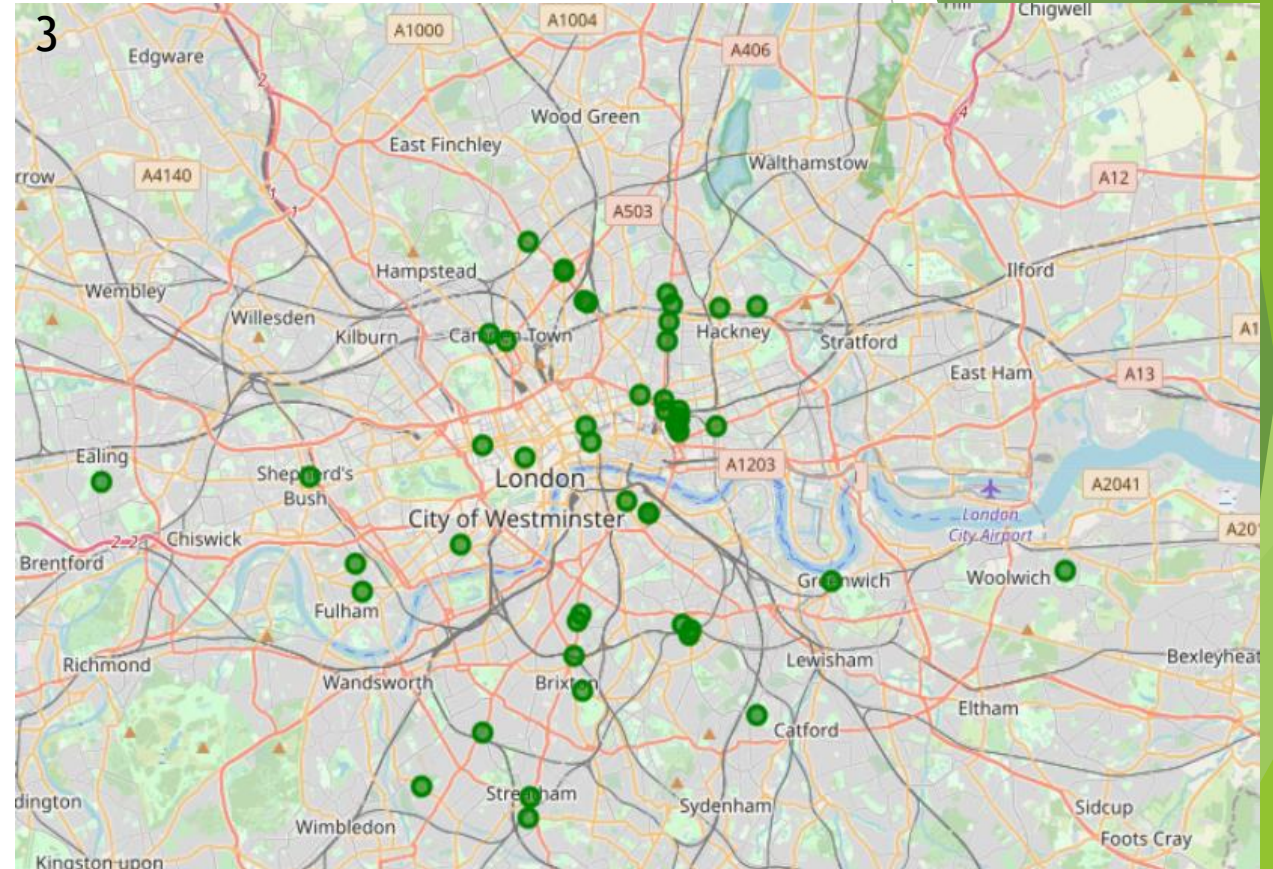
As it is impossible to check the standards and cross contamination rates in regular restaurants, I wanted to pick up a challenge of studying only vegan venues.

Vegan venues in London according to Foursquare

An average distance of the vegan establishment from the centre of London is 5420. Number of actual vegan restaurants according to Foursquare data is 35.

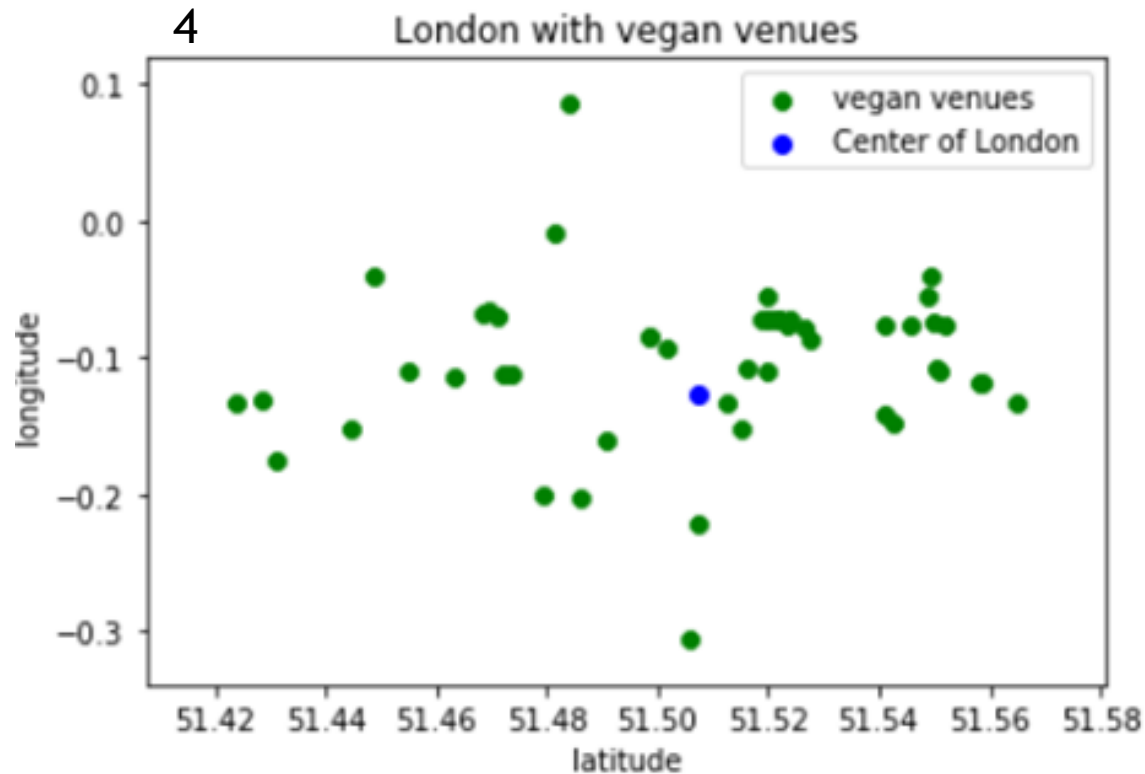
Other venues:

- ▶ two food tracks,
- ▶ farmers market,
- ▶ a vegan cooking school,
- ▶ regular market,
- ▶ two bakeries,
- ▶ two grocery store
- ▶ tearoom,
- ▶ donut shop.
- ▶ café,



Map of London with vegan venues

Exploratory Data Analysis



Relationship between Vegan venues and the City Centre

- ▶ average distance from the centre of London: 5420 meters
- ▶ range between the furthest South and North establishments is $\sim 0.4^\circ$
- ▶ The difference between East and West vegan places is 0.04° in latitude.

Vegan restaurants in London numbers overview:

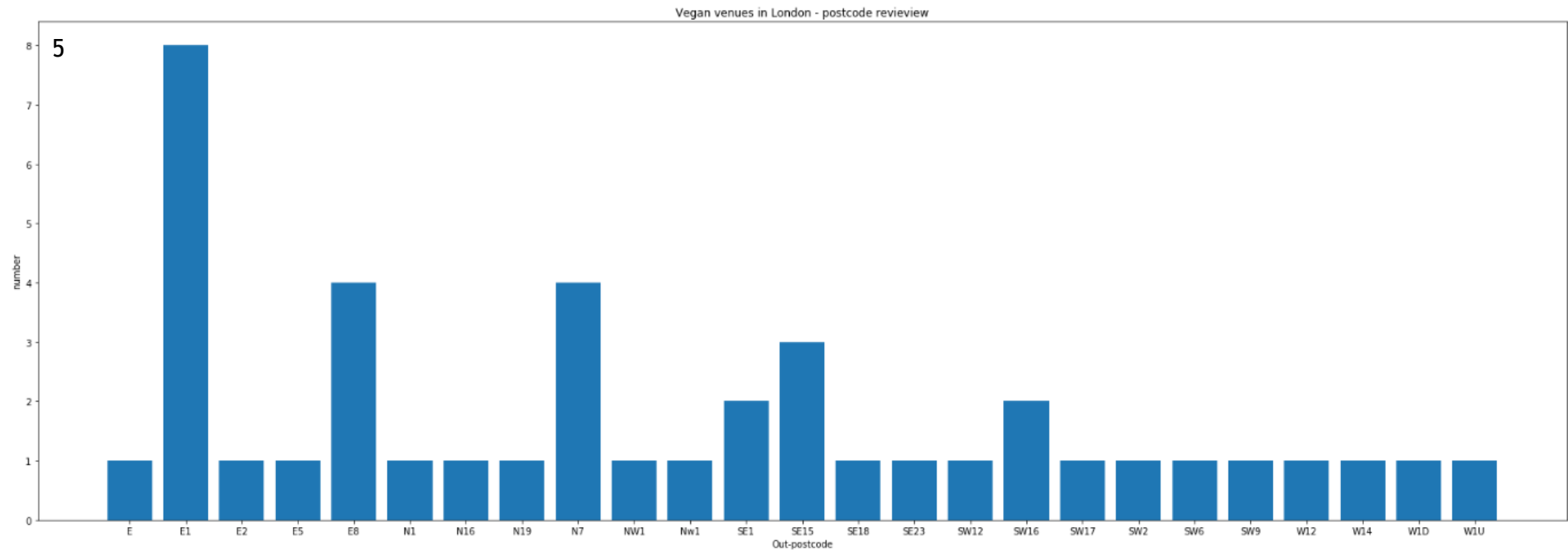
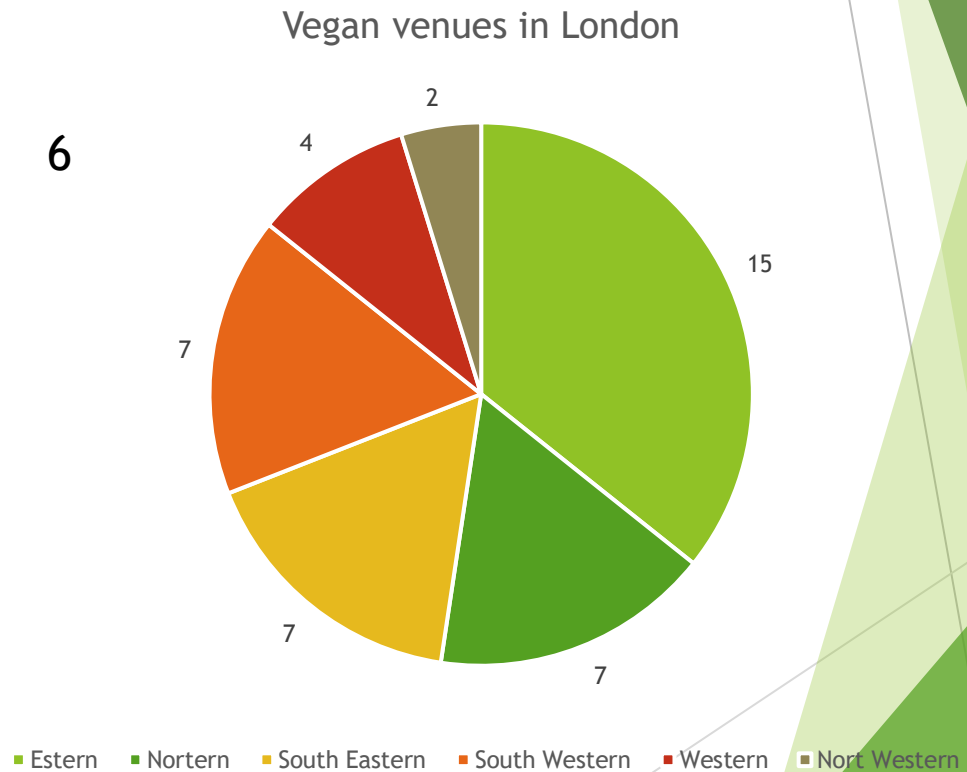


Diagram: which postcode area is the most vegan venues - summary.

- ▶ E1 (East London) area postcode - largest amount of the vegan establishments (8)
- ▶ Second popular with 4 vegan restaurants are E8 (East London) and N7 (North London)
- ▶ 3 venues is SE15 in South East district
- ▶ 4 vegan places in the West district of London
- ▶ North Western districts 2 vegan venue

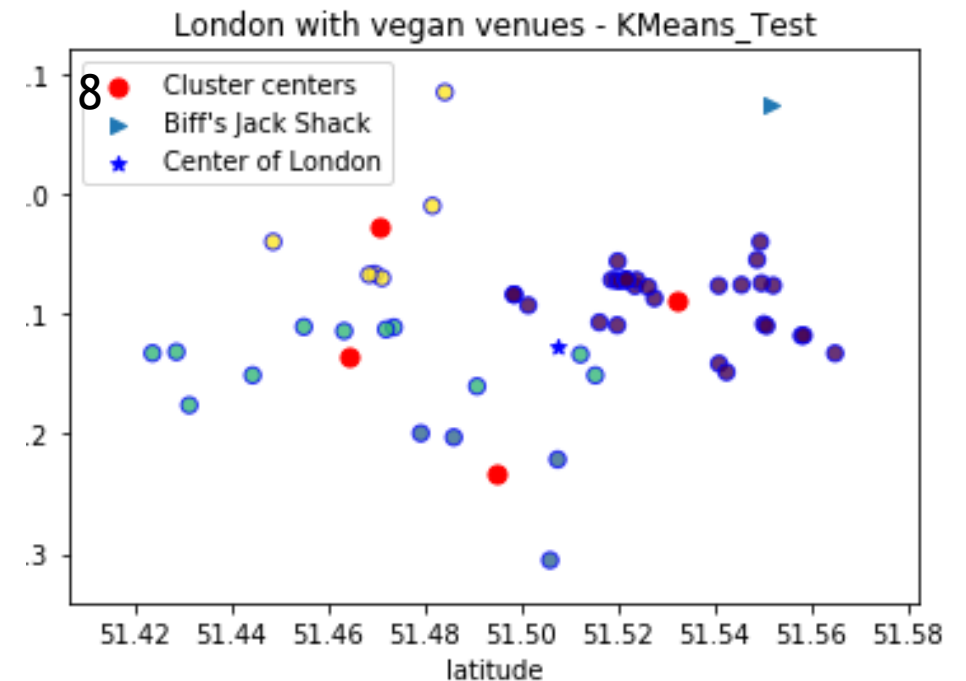
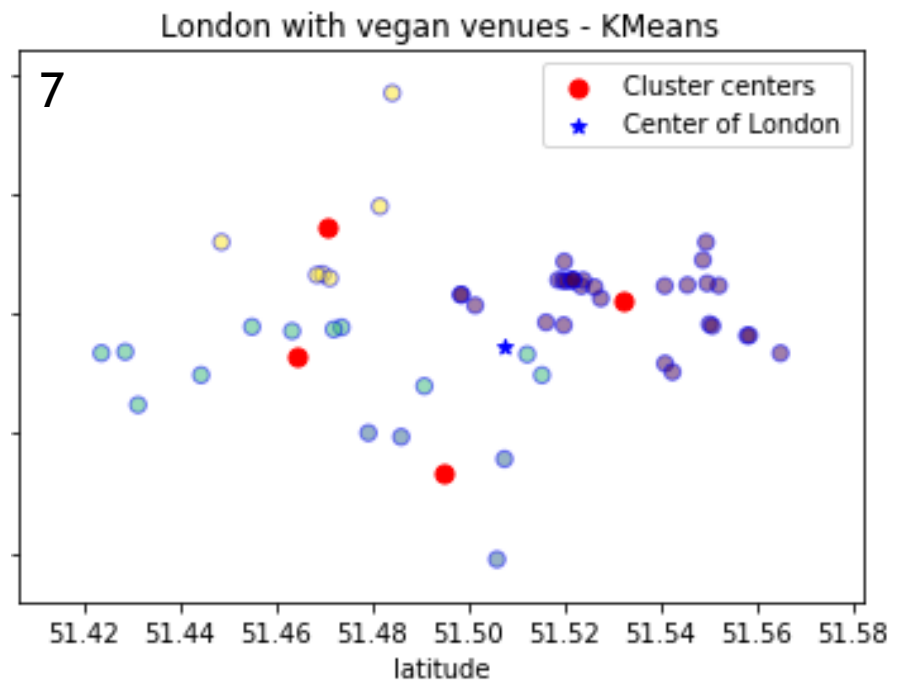
Relationship between Postcodes and vegan venues

- ▶ Eastern Districts including East Central has 15 vegan venues
- ▶ Northern, South Eastern and South Western Districts have 7 venues, respectively.
- ▶ There are 4 vegan places in the West district of London and North Western districts have 2 of them.

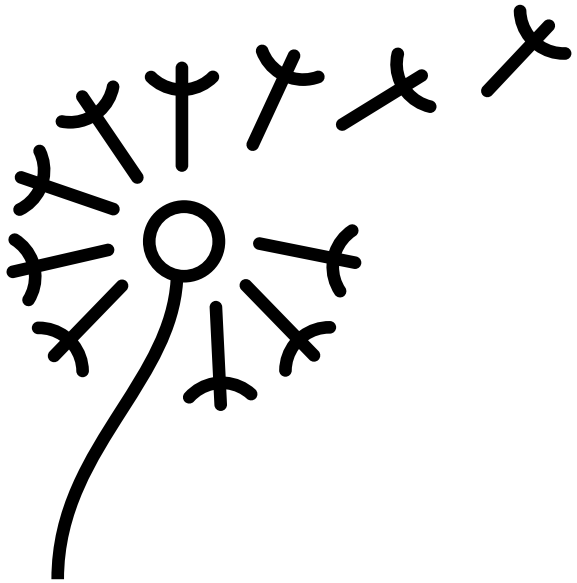


Predictive Modelling

- ▶ Figure on the top: Clustering of vegan venues placement based on their longitude and latitude with using KMeans in Python.
- ▶ Figure on the bottom: Testing of not included in Foursquare data venue (represented by a triangle and it is named Biff's Jack Shack) in KMeans (Python)
- ▶ KMeans for that new venue: 3 array



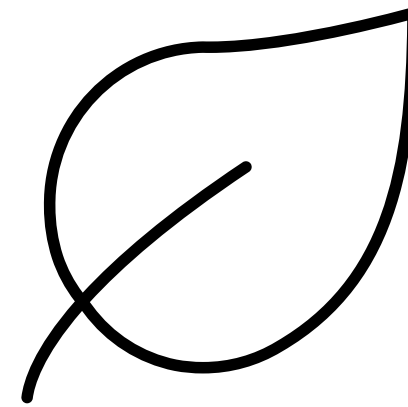
Summary:



- ▶ The most veganized area in London is Eastern E1 (8 venues).
- ▶ Overall Eastern districts have the largest amount of vegan venues and restaurants which are densely clustered (15 venues).
- ▶ The least 'populated' district with 2 venues is North Western postal district. In general, vegan restaurants can be found around the center of London city.
- ▶ main clusters show similar placement to a Cardinal direction with some modifications

What future brings:

- ▶ veganism growing in the British population
- ▶ North Western London's district - new uncovered place for vegan restaurants?
- ▶ the best place to visit in the future E1 district of London



Thank you for your time!

Sources:

- ▶ 1. PowerPoint Stock Photo
- ▶ 2. PowerPoint Stock Photo
- ▶ 3. Map of London with placed Vegan venues obtained via Foursquare engine.
- ▶ 4. Representation of London city centre in relation to vegan venues around it.
- ▶ 5. Diagram that shows in which postcode area is the most vegan venues.
- ▶ 6. Shows London venues data in relation to each other
- ▶ 7. Presents Clustering of vegan venues placement based on their longitude and latitude with using KMeans in Python.
- ▶ 8. Presents testing of clustering of vegan venues placement based on their longitude and latitude with using KMeans in Python. Testing data venue is represented by a triangle and it is named Biff's Jack Shack.