

Food Guide to Lincoln

March 30, 2020

Coursera Applied Data Science Capstone Project

Introduction

The city of Lincoln is the capital of the state of Nebraska. While unbeknownst to many outside America, and even within America, Lincoln is home to one of the members of the Big Ten Conference, namely, the University of Nebraska-Lincoln. Additionally, Lincoln has been dubbed one of the most welcoming cities in America, and has been increasingly drawing a wide variety of people, including refugees and startup companies.

Considering the city's growing population, and in an attempt to paint a picture of the city, this project seeks to create a fun and easy food guide to Lincoln using crowd-sourced data from Foursquare. Those new to the city, or those who have still yet to fully explore the city, may find this guide helpful and informative for their eating and drinking pleasure.



Data

This project will use location data from Foursquare, within the city boundaries of Lincoln. Specifically, the University of Nebraska-Lincoln (UNL) will be used as the central point in Lincoln since it is strategically located within Lincoln and draws the largest and most diverse crowd among students, faculty, and staff from outside the city. Top venue picks within a 5-mile radius of UNL will be obtained using the Foursquare API. Subsequently, suggestions will be provided from the results of the exploratory analyses. Specific focus will be given to venue categories pertaining to food and beverages.



Image courtesy of the University of Nebraska-Lincoln.

Methodology

The methodology behind this project is simple yet meets the needs of creating a food guide for newcomers to the city of Lincoln. First, the Foursquare API is used to obtain top venue picks around a given location. In order to do this, a URL is constructed by setting appropriate parameters, sending a request to the Foursquare API, and retrieving the search results. As aforementioned, this project defines UNL as the central location with a latitude of 40.820744 and a longitude of -96.700470. Top venue picks within a 5-mile radius of UNL is then queried via the API.

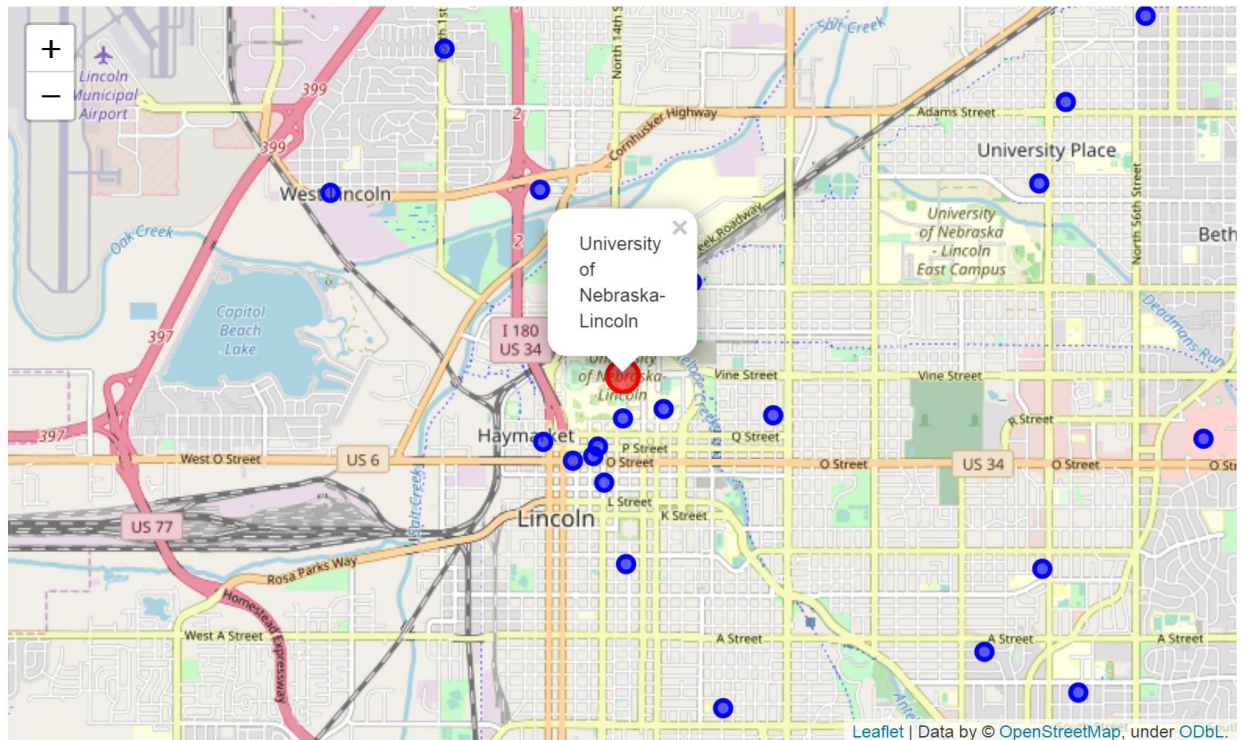
Upon retrieving the results, some data management is conducted to clean and prepare the data for further analyses. Once this has been done, the venue results are visualized on a map. Additional exploratory analyses are then conducted to identify top venue picks that pertain to food and beverages.

Results

Upon retrieving top venue picks from Foursquare, a total of 49 venues were obtained.

	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress	label
0	Top Picks	Housing Development	NaN	US	Lincoln	United States	NaN	7317	[Lincoln, NE 68512, United States]	[{"label": "Top Picks", "lat": 40.75, "lon": -96.63, "distance": 7317, "category": "Housing Development"}]
1	Top Of The Capital	Capitol Building	1445 K St	US	NaN	United States	at 13th & M St	1002	[1445 K St (at 13th & M St), NE 68508, United States]	[{"label": "Top Of The Capital", "lat": 40.81, "lon": -96.63, "distance": 1002, "category": "Capitol Building"}]
2	Kuhns Top	Stables	NaN	US	Lincoln	United States	NaN	402	[Lincoln, NE 68508, United States]	[{"label": "Kuhns Top", "lat": 40.81, "lon": -96.63, "distance": 402, "category": "Stables"}]
3	Top Golf Swing Suite	Hotel	141 N 9th St	US	Lincoln	United States	NaN	963	[141 N 9th St, Lincoln, NE 68508, United States]	[{"label": "Top Golf Swing Suite", "lat": 40.81, "lon": -96.63, "distance": 963, "category": "Hotel"}]
4	Top Shelf Beverage Services	Wine Shop	1036 O St	US	Lincoln	United States	NaN	909	[1036 O St, Lincoln, NE 68508, United States]	[{"label": "Top Shelf Beverage Services", "lat": 40.81, "lon": -96.63, "distance": 909, "category": "Wine Shop"}]
5	Topeka	None	NaN	US	Lincoln	United States	NaN	478	[Lincoln, NE 68508, United States]	[{"label": "Topeka", "lat": 40.81, "lon": -96.63, "distance": 478, "category": "None"}]
6	The Top Hat	Bar	736 W Cornhusker Hwy	US	Lincoln	United States	NaN	3184	[736 W Cornhusker Hwy, Lincoln, NE 68521, United States]	[{"label": "The Top Hat", "lat": 40.81, "lon": -96.63, "distance": 3184, "category": "Bar"}]
7	Centerstone Condos Roof Top Deck	Garden	100 N 12th St	US	Lincoln	United States	o	788	[100 N 12th St (o), Lincoln, NE 68508, United States]	[{"label": "Centerstone Condos Roof Top Deck", "lat": 40.81, "lon": -96.63, "distance": 788, "category": "Garden"}]

These results are then visualized on a map, with UNL as the central point.



Since these venues incorporated all kinds of categories, a closer look at the types of categories that relate to food and drinks is obtained.

```
array(['Housing Development', 'Capitol Building', 'Stables', 'Hotel',  
      'Wine Shop', None, 'Bar', 'Garden', 'Gym / Fitness Center',  
      'Pizza Place', 'Residential Building (Apartment / Condo)',  
      'Speakeasy', 'Clothing Store', 'Automotive Shop', 'Food',  
      'Salon / Barbershop', 'Diner', 'Advertising Agency', 'Men's Store',  
      'Home Service', 'Ice Cream Shop', 'Miscellaneous Shop',  
      'Construction & Landscaping', 'Beer Garden', 'Road', 'Rest Area',  
      'Frozen Yogurt Shop'], dtype=object)
```

The categories relevant for the food guide are as follows: bar, pizza place, speakeasy, food, diner, ice cream shop, beer garden, and frozen yogurt shop. These venues end up making the food guide to Lincoln, as presented in the Discussion section below.

Discussion

Using Foursquare location data, these venues end up making the list of places to visit in Lincoln for food and drinks:

Drinks:

1. The Top Hat
2. Zee Bungalow
3. Nebraska Top Hop Competition

Food:

1. Toppers Pizza
2. Scooter's Coffee House
3. Roof Top Diners
4. Cherry On Top
5. Topper Popper



Image courtesy of Scooter's.

While this information is helpful, it is important to note that there are other crowd-sourced review forum apart from Foursquare that might add to this guide. Some examples include Yelp and TripAdvisor. If Lincolmites do not frequently use Foursquare to review venues, then the data retrieved from the Foursquare API may not yield the best quality guide to begin with. Nonetheless, this food guide is still reliable as it is informed by data and not merely the opinion of a single individual.

Conclusion

In conclusion, this project provides a food guide of the top venue picks located within a 5-mile radius of the University of Nebraska-Lincoln as informed by Foursquare's location data. Those who have recently arrived in the city of Lincoln, particularly new students to the University, may find this guide as a good starting point for exploring food and drink options, and having reliable spots to meet with people in forming new connections and friendships.