

Taking a Trip to Charlotte, NC

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IBM Data Science Capstone



The Problem: Visiting Charlotte

- How to find the hottest part of town?
- How to know which restaurants are best?
- How to know which restaurants serve the food we want?
- How to find those restaurants?

The Data:

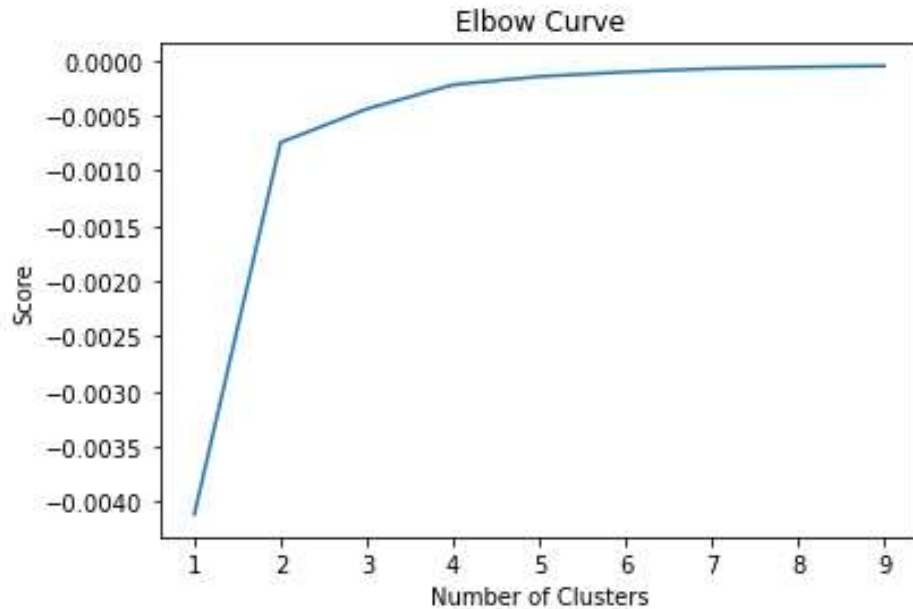
- Geopy - the geographical coordinates of Charlotte NC.
- The geographical coordinates of restaurants and shopping in Charlotte NC. This will be returned by a Foursquare API “explore” query.
- The details, such as, likes, rating, and categories of venues within regions of Charlotte NC. This will be returned by Foursquare API “details” queries for each venue.

Using Foursquare to find venues

https://api.foursquare.com/v2/venues/explore?&client_id={} &client_secret={} &v={} &ll={}, {} &radius={} &limit={} &price={}

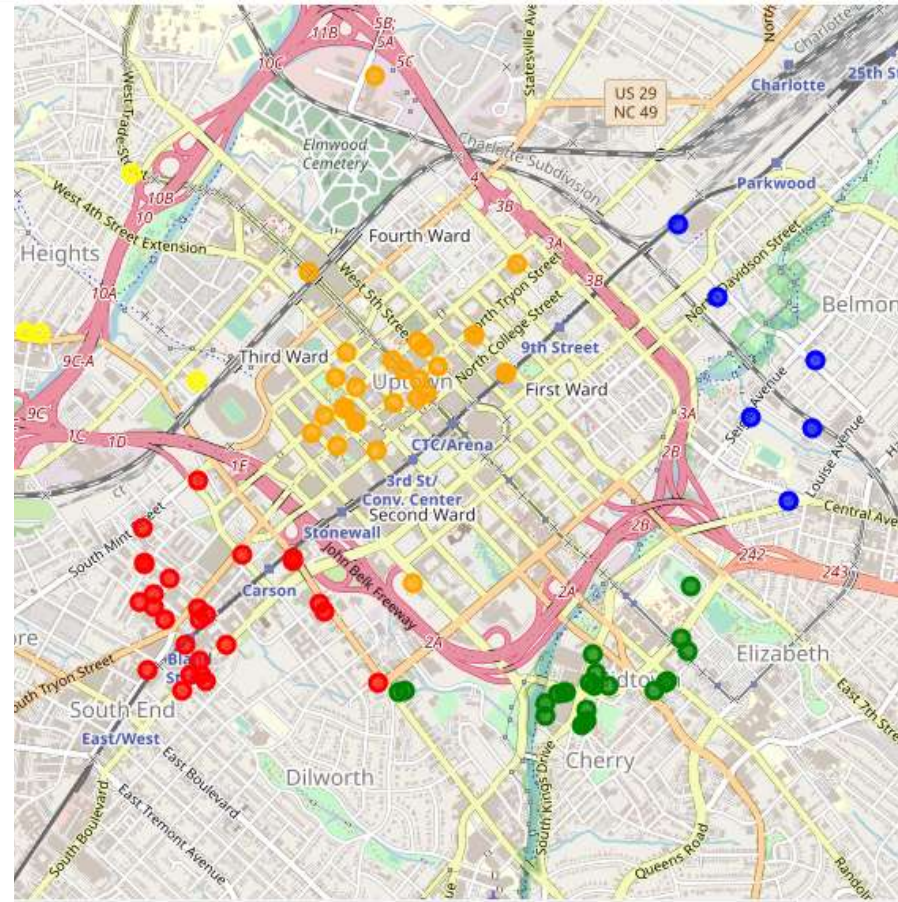
	id	lat	lng	name
0	4e2ffb921838f1c552ca5f70	35.226234	-80.844124	Vapiano
1	4bb14a46f964a520fa893ce3	35.226615	-80.842317	Aria Tuscan Grill
2	4b466381f964a5206f1f26e3	35.228656	-80.842479	Dandelion Market
3	55a42c96498e793e0e13b18c	35.229240	-80.839710	The Cellar
4	576eb02b498e5c4439a993cd	35.226891	-80.846126	Not Just Coffee

Clustering our venues



cluster centers

```
[ [ 35.21695313 -80.85420957 ]  
  [ 35.21368823 -80.83351362 ]  
  [ 35.22760503 -80.82417577 ]  
  [ 35.23056105 -80.86016398 ]  
  [ 35.2274064 -80.8440707 ] ]
```



Retrieving Venue Details

```
'https://api.foursquare.com/v2/venues/{}?&client_id={} &client_secret={} &v={} '
```

	id	name	rating	likes	categories	description	location
16	4b21405cf964a520033924e3	Little Village Grill	9.3	83	greek restaurant	NaN	710 W Trade St Ste G (btwn Graham & Cedar)Char...
5	4cd3543b793d224bff884810	Not Just Coffee	9.1	182	coffee shopcafé	Hand Crafted Espresso and Pour Over Coffee	224 E. 7th St (btw Brevard and College)Charlot...
3	55a42c96498e793e0e13b18c	The Cellar	9.0	44	restaurantcocktail barbeer garden	The Cellar at Duckworth's combines gastropub f...	330 N Tryon St (7th Street)Charlotte, NC 28202...
28	4d890fbb1508a143cec9051e	VBGB Beer Hall & Garden/Restaurant	8.6	331	beer garden	GPS Users: 935 N. Graham St then follow signs ...	920 Hamilton StCharlotte, NC 28206United States
0	4e2ffb921838f1c552ca5f70	Vapiano	8.6	207	italian restaurantpizzaplacebar	PASTA PIZZA BAR	201 S Tryon St (E 4th St)Charlotte, NC 28202Un...
8	56539dc6498e84bcd93141c	Amelie's French Bakery — Uptown	8.6	184	bakery	NaN	301 S Tryon St (Martin Luther King Blvd.)Charl...
1	4bb14a46f964a520fa893ce3	Aria Tuscan Grill	8.6	85	italian restaurantamerican restaurant	NaN	100 N Tryon StCharlotte, NC 28202United States
7	4b50eb53f964a520b73827e3	Courtyard Hooligans	8.6	75	sports bardive barpub	Courtyard Hooligans is an international pub wi...	140 Brevard Ct (3rd and Church)Charlotte, NC 2...
4	576eb02b498e5c4439a993cd	Not Just Coffee	8.6	40	café	NaN	222 S Church StCharlotte, NC 28202United States
2	4b466381f964a5206f1f26e3	Dandelion Market	8.5	234	tapas restaurantamerican restaurantpub	Dandelion Market provides Uptown Charlotte wit...	118 W 5th St (N Church St)Charlotte, NC 28202U...

Selecting our top venues

	name	description	location	id	lat	lng
0	Not Just Coffee	Hand Crafted Espresso and Pour Over Coffee	224 E. 7th St (btw Brevard and College)Charlotte...	4cd3543b793d224bff884810	35.227537	-80.838005
1	Which Wich Uptown	NaN	101 S Tryon St (E Trade St)Charlotte, NC 28280...	564cb152498eb31a4de6fd79	35.226412	-80.842841
2	Vapiano	PASTA PIZZA BAR	201 S Tryon St (E 4th St)Charlotte, NC 28202Un...	4e2ffb921838f1c552ca5f70	35.226234	-80.844124
3	The Cellar	The Cellar at Duckworth's combines gastropub f...	330 N Tryon St (7th Street)Charlotte, NC 28202...	55a42c96498e793e0e13b18c	35.229240	-80.839710
4	Vapiano	PASTA PIZZA BAR	201 S Tryon St (E 4th St)Charlotte, NC 28202Un...	4e2ffb921838f1c552ca5f70	35.226234	-80.844124
5	Courtyard Hooligans	Courtyard Hooligans is an international pub wi...	140 Brevard Ct (3rd and Church)Charlotte, NC 2...	4b50eb53f964a520b73827e3	35.226021	-80.846857



Conclusion

- Not Just Coffee
- Which Wich Uptown
- Vapiano's Italian Restaurant
- Courtyard Hooligans International Pub