

Restaurant in Tulsa

Battle of Neighborhoods

Where should I open my restaurant?



Coding

- Search for all venues around Tulsa
- Different geographical positions to cover the whole town

```
In [123]: from pandas.io.json import json_normalize
address = 'Tulsa , Oklahoma'
nearby_venues_total = []
geolocator = Nominatim(user_agent="tulsa_explorer")
location = geolocator.geocode(address)
TULatitude = location.latitude - 1
TULongitude = location.longitude + 1
print('The geographical coordinate of Tulsa are {}, {}'.format(TULatitude, TULongitude))

# function that extracts the category of the venue
def get_category_type(row):
    try:
        categories_list = row['categories']
    except:
        categories_list = row['venue.categories']

    if len(categories_list) == 0:
        return None
    else:
        return categories_list[0]['name']

lo = 0
la = 0
LIMIT = 100
radius = 500
while TULongitude > -95.9924113:
    while TULatitude < 36.1551805:
        url = 'https://api.foursquare.com/v2/venues/explore?client_id={}&client_secret={}&v={}&ll={},{}&radius={}&limit={}'.format(
            CLIENT_ID,
            CLIENT_SECRET,
            VERSION,
            TULatitude,
            TULongitude,
            radius,
            LIMIT)

        results = requests.get(url).json()

        #venues = results['response']['groups'][0]['items']

        #nearby_venues = json_normalize(venues) # flatten JSON

        #filter columns
        #filtered_columns = ['venue.name', 'venue.categories', 'venue.location.lat', 'venue.location.lng']

        # nearby_venues = nearby_venues.loc[:, filtered_columns]

        # filter the category for each row
        #nearby_venues['venue.categories'] = nearby_venues.apply(get_category_type, axis=1)

        #clean columns
        #nearby_venues.columns = [col.split(".")[0] for col in nearby_venues.columns]

        #nearby_venues_total.append(nearby_venues)

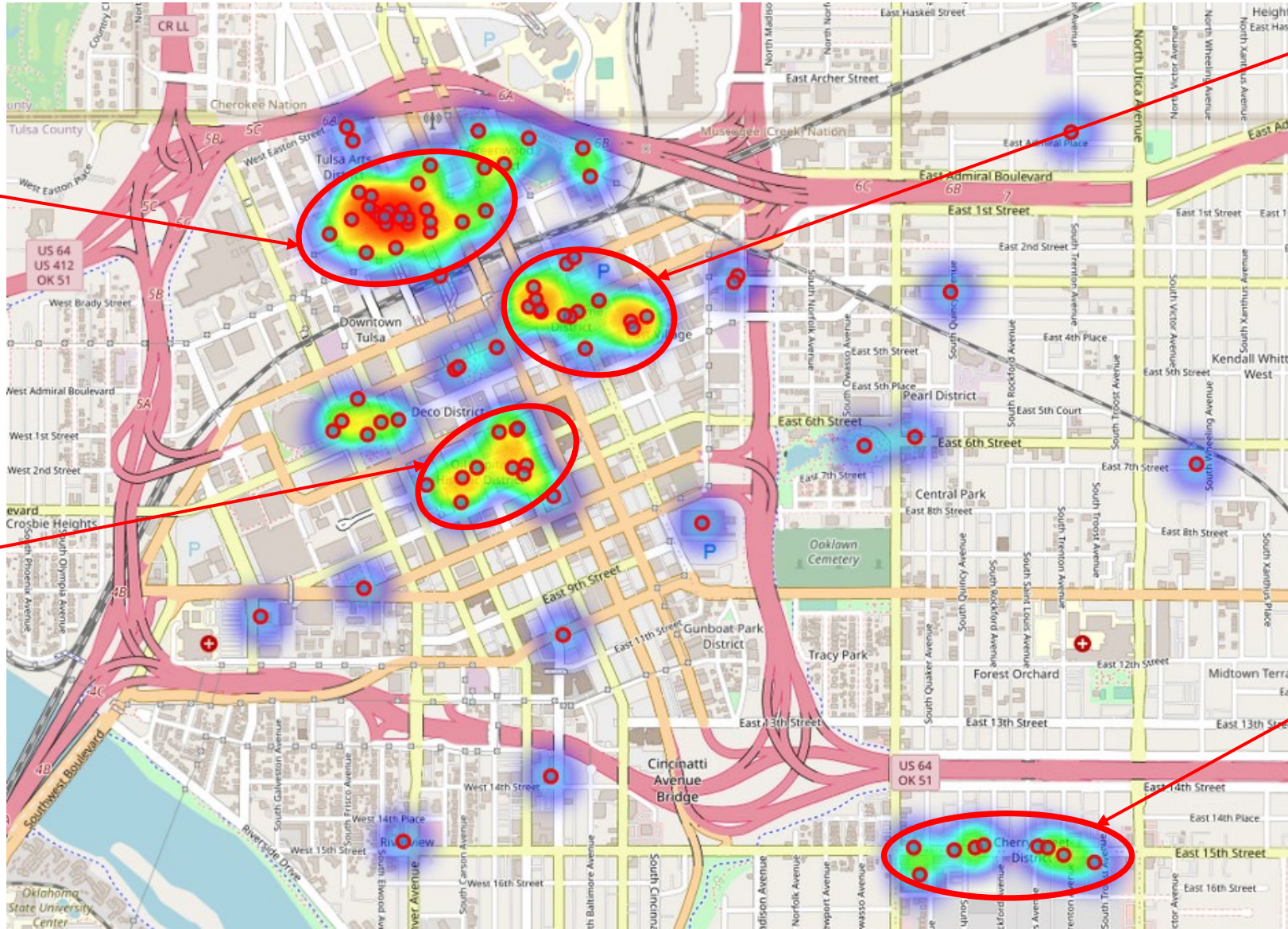
        TULatitude += 0.1
        TULongitude -= 0.1
    #nearby_venues_total.head()
```


Where should I open my restaurant?

- Many existing restaurants → high competition

- Many hotels → Many visitors and potential customers

- BUT: Close to the big hotspot and high competition



- Many hotels → Many visitors and potential customers
- BUT: Close to the big hotspot and high competition
- Few existing restaurants of different cuisines → Good spot for a new restaurant