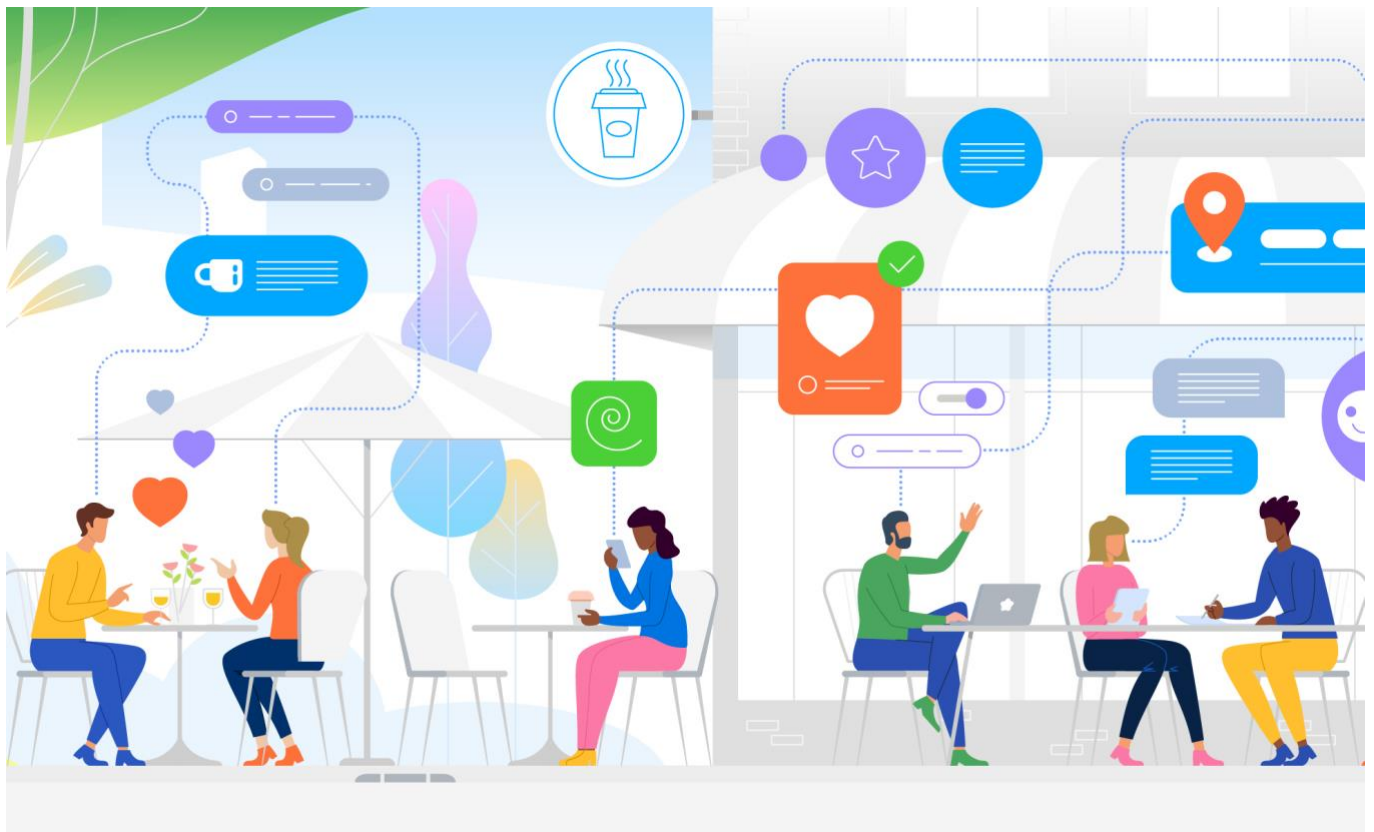# Find the best place to meet in a BIG city

1.Introduction

Big cities are indeed beautiful places with a lot of attractions. People living there have a quite big variety for choosing where to hold a meeting with a friend(s). However, having this variety and time spent on reaching that place is a big problem.

That is why this project intends to collect locations of 2 people and provide a data-driven recommendation for an attractive place, which will be more or less equally distanced for both of them.

The sample recommender provided in this notebook will use the following case scenario:

- 2 people plan to meet each other and choose a suitable place for it

- They mark each other's location, and by using the Foursquare API program will explore places between these 2 points

- After measuring distances and collecting ratings and reviews, it will return a sorted list of suitable venues for that meeting

2. Data acquisition

This demonstration will make use of the following data sources:

1. New York City dataset downloaded from https://geo.nyu.edu/catalog/nyu_2451_34572, which contains all necessary information like borough, neighbourhood, latitude and longitude:

```
{'type': 'Feature',
 'id': 'nyu_2451_34572.1',
 'geometry': {'type': 'Point',
  'coordinates': [-73.84720052054902, 40.89470517661]},
 'geometry_name': 'geom',
 'properties': {'name': 'Wakefield',
  'stacked': 1,
  'annoline1': 'Wakefield',
  'annoline2': None,
  'annoline3': None,
  'annoangle': 0.0,
  'borough': 'Bronx',
  'bbox': [-73.84720052054902,
   40.89470517661,
   -73.84720052054902,
   40.89470517661]}}
```

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585

2. Venue Recommendations from FourSquare API (www.foursquare.com)
I will be using the FourSquare API explore function to get the most common venue categories in the specified region and the following information will be retrieved:

- Venue ID and Name

- Coordinates: Latitude and Longitude

- Category Name

Venue	Venue Latitude	Venue Longitude	Venue Category
Arturo's	40.874412	-73.910271	Pizza Place
Bikram Yoga	40.876844	-73.906204	Yoga Studio
Tibbett Diner	40.880404	-73.908937	Diner
Dunkin'	40.877136	-73.906666	Donut Shop
Starbucks	40.877531	-73.905582	Coffee Shop

Other venue queries will be performed to retrieve venue prices, openNow and ratings for each location. However, some of them are paid services and we are limited to 50 queries per day.