



Coursera Capstone
Opening a New Yoga Studio in The City
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Introduction

- ◆ Toronto and New York City are 2 of the most popular cities on the east coast of North America.
- ◆ Toronto is a bustling metropolis with green lands, busy people, and skyscrapers. The most notable of all being the CN Tower.
- ◆ New York City is a densely populated city consisting of 5 boroughs and iconic sites such as the empire State Building, Broadway theater, and the serene Central Park.

Business Problem

- ◆ Both Toronto and New York City are densely populated cities filled with different shops, parks, and main attractions.
- ◆ A client is interested in opening a yoga studio and wants to find the city with the least amount of yoga studios. That way competition is minimal.

Data

- ◆ Toronto's postal code, neighborhood, and borough data was scraped from [List of postal codes of Canada: M](#) from Wikipedia
- ◆ Toronto's longitude and latitude was collected from Geospatial_Coordinates.csv
- ◆ Toronto venues were collected from Foursquare API.
- ◆ New York City neighborhood, borough, longitude, latitude, and venues were collected from Foursquare API.

Methodology

- ◆ Web scraping was completed using beautiful soup to scrape data from Wikipedia
- ◆ Retrieved longitude and latitude from Geocoder
- ◆ Used Foursquare API to retrieve venues
- ◆ Filtered total venues
- ◆ Filtered yoga studio venues
- ◆ Visualize number of yoga studios

Results-Toronto

- ◆ Filtering the number of Yoga studios in the Toronto data frame
- ◆ There are 12 Yoga studios in Toronto within 500 meters of the city

```
In [60]: #Filtering the data frame to show all the yoga studios in the area and how many  
df_filter=venues_df.VenueCategory.str.contains('Yoga')  
print(venues_df[df_filter].shape)  
venues_df[df_filter]
```

(12, 9)

Out[60]:

	Postal Code	Borough	Neighborhood	BoroughLatitude	BoroughLongitude	VenueName	VenueLatitude	VenueLongitude	VenueCategory
11	M4K	East Toronto	The Danforth West, Riverdale	43.679557	-79.352188	Moksha Yoga Danforth	43.677622	-79.352116	Yoga Studio
91	M4M	East Toronto	Studio District	43.659526	-79.340923	Spirit Loft Yoga	43.663548	-79.341333	Yoga Studio
115	M4R	Central Toronto	North Toronto West, Lawrence Park	43.715383	-79.405678	Barreworks	43.714070	-79.400109	Yoga Studio
267	M4Y	Downtown Toronto	Church and Wellesley	43.665860	-79.383160	Bikram Yoga Yonge	43.668205	-79.385780	Yoga Studio
277	M4Y	Downtown Toronto	Church and Wellesley	43.665860	-79.383160	The Yoga Sanctuary	43.661499	-79.383636	Yoga Studio
335	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636	The Yoga Lounge	43.655515	-79.364955	Yoga Studio
619	M5G	Downtown Toronto	Central Bay Street	43.657952	-79.387383	The Yoga Sanctuary	43.661499	-79.383636	Yoga Studio
1094	M5S	Downtown Toronto	University of Toronto, Harbord	43.662696	-79.400049	Sivananda Yoga Centre	43.662754	-79.402951	Yoga Studio
1266	M5W	Downtown Toronto	Stn A PO Boxes	43.646435	-79.374846	Bikram Yoga Centre	43.649214	-79.375229	Yoga Studio
1444	M6J	West Toronto	Little Portugal, Trinity	43.647927	-79.419750	YogaSpace	43.647607	-79.420133	Yoga Studio
1572	M6S	West Toronto	Runnymede, Swansea	43.651571	-79.484450	(The New) Moksha Yoga Bloor West	43.648658	-79.485242	Yoga Studio
1582	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494	The Yoga Sanctuary	43.661499	-79.383636	Yoga Studio

Results-New York

- ◆ Filtering the number of Yoga studios in the New York City data frame
- ◆ There are 32 Yoga studios in New York City within 500 meters of the city

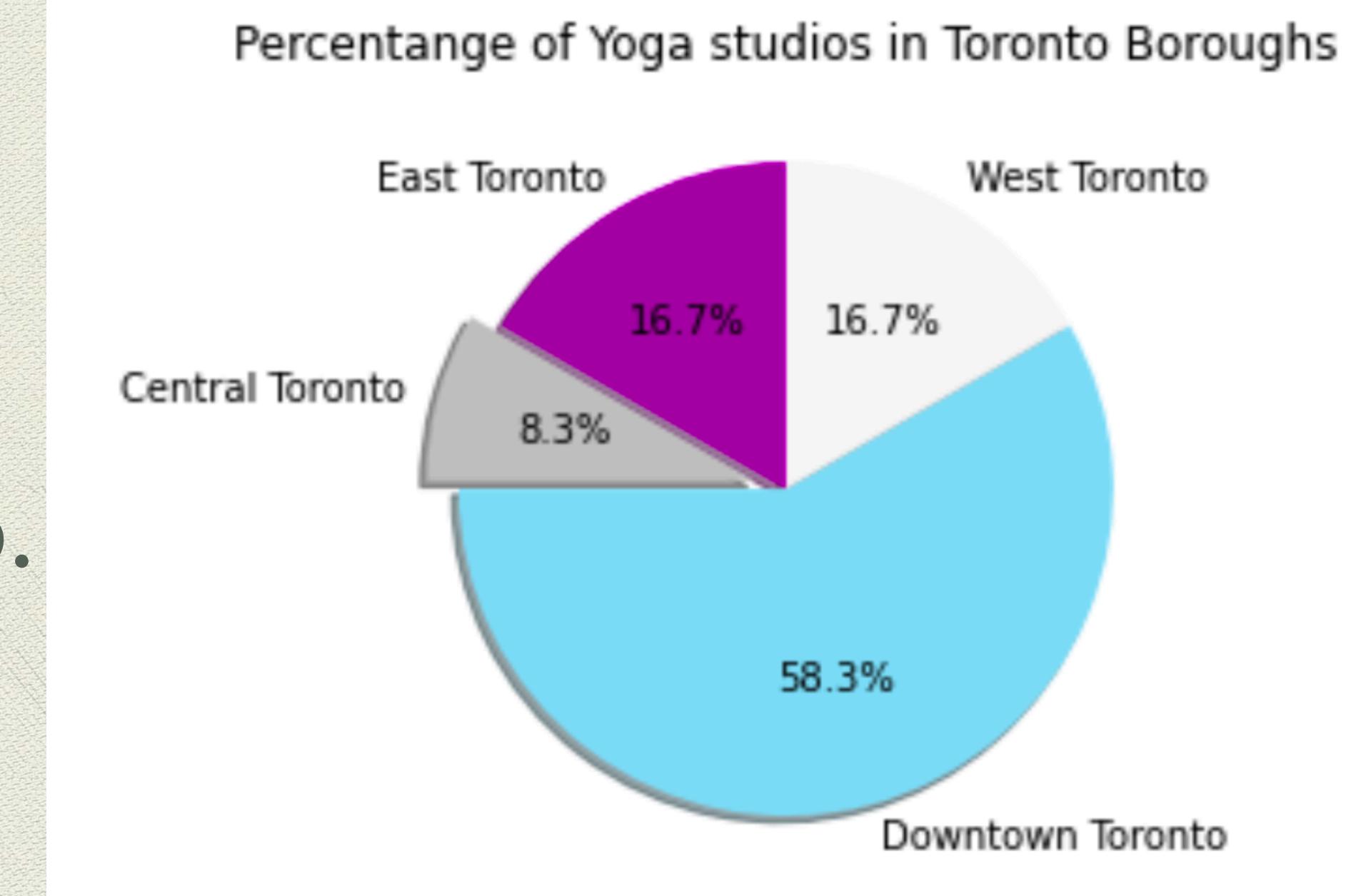
```
[71]: #Filtering the data frame to show all the yoga studios in the area and how many
df_filter=manhattan_venues.VenueCategory.str.contains('Yoga')
print(manhattan_venues[df_filter].shape)
manhattan_venues[df_filter]
```

(32, 7)

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	VenueCategory
1	Marble Hill	40.876551	-73.910660	Bikram Yoga	40.876844	-73.906204	Yoga Studio
220	Inwood	40.867684	-73.921210	Bread and Yoga	40.868229	-73.918028	Yoga Studio
266	Hamilton Heights	40.823604	-73.949688	Bikram Yoga Harlem	40.825672	-73.948887	Yoga Studio
278	Hamilton Heights	40.823604	-73.949688	Brahman Yoga Studio	40.825319	-73.947848	Yoga Studio
496	Upper East Side	40.775639	-73.960508	Y7 – Upper East Side	40.776495	-73.955594	Yoga Studio
500	Upper East Side	40.775639	-73.960508	Bode NYC - Upper East Side	40.776990	-73.955684	Yoga Studio
544	Upper East Side	40.775639	-73.960508	CorePower Yoga	40.778481	-73.956128	Yoga Studio
849	Upper West Side	40.787658	-73.977059	Upper West Side Yoga and Wellness	40.785682	-73.972310	Yoga Studio
931	Lincoln Square	40.773529	-73.985338	CorePower Yoga	40.776861	-73.981803	Yoga Studio
1257	Murray Hill	40.748303	-73.978332	mang'Oh yoga	40.747446	-73.972614	Yoga Studio
1384	Greenwich Village	40.726933	-73.999914	Sacred Sounds Yoga	40.728638	-74.000115	Yoga Studio

Discussion

- ◆ Opening a yoga studio in Toronto would be the best compared to New York City because there is less competition.
- ◆ The best borough to open a yoga studio in would be Central Toronto.
- ◆ There is only one yoga studio in Central Toronto.



Conclusion

- ◆ To answer the business problem, Toronto would be the best city to open a yoga studio. Specifically, Central Toronto.
- ◆ This project is relevant to stakeholders that are interested in expanding and maximizing their investments. Less competition in certain areas brings a high chance of new clients.