

IBM Data Science Capstone Project

How Hip are Brooklyn Neighborhoods?

Introduction

Brooklyn NY is notoriously (obnoxiously) hip—known for hot Yoga studios, elusive speakeasies and overpriced coffee. But Brooklyn is a big place with a myriad of different neighborhoods. For this project, I am exploring how we can use data to identify which neighborhoods in Brooklyn offer the highest number of Hipster-amenities. The output from this project could be used by prospective renters looking for an archetypical Brooklyn experience, or real estate agents hoping to most effectively promote properties in these areas. Personally, as a hipster who has lived in Brooklyn for the past 7 years, I want to use data to see if I can validate some existing stereotypes and understand, empirically, which neighborhoods are the hippest in Brooklyn.

Data Sources

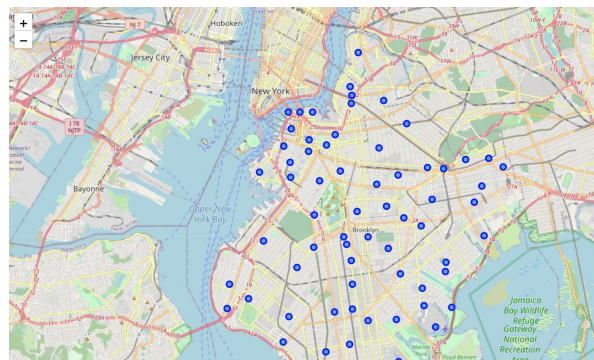
To undertake this momentous investigation I will need to leverage two main data sources:

1. **NYC Neighborhood Data.** 'newyork_data.json' provides a comprehensive list of neighborhoods in New York that includes their Boroughs and Latitude and Longitude.

Neighborhood data in dataframe

	Borough	Neighborhood	Latitude	Longitude
0	Brooklyn	Bay Ridge	40.625801	-74.030621
1	Brooklyn	Bensonhurst	40.611009	-73.995180
2	Brooklyn	Sunset Park	40.645103	-74.010316
3	Brooklyn	Greenpoint	40.730201	-73.954241
4	Brooklyn	Gravesend	40.595260	-73.973471

Neighborhood data mapped with Folium



2. **The Foursquare API.** I can pull information about adjacent venues from 'api.foursquare.com'.

Foursquare venue data in dataframe

	name	categories	lat	lng
0	Pilo Arts Day Spa and Salon	Spa	40.624748	-74.030591
1	Bagel Boy	Bagel Shop	40.627896	-74.029335
2	Cocoa Grinder	Juice Bar	40.623967	-74.030863
3	Leo's Casa Calamari	Pizza Place	40.624200	-74.030931
4	Pegasus Cafe	Breakfast Spot	40.623168	-74.031186

Venue data by nearest neighborhood

Neighborhood	Yoga Studio	Accessories Store	American Restaurant	Antique Shop	Arepa Restaurant	Argentinian Restaurant	Art Gallery	Arts & Crafts Store	Arts & Entertainment	Asian Restaurant
0 Bath Beach	0	0	0	0	0	0	0	0	0	1
1 Bay Ridge	0	0	3	0	0	0	0	0	0	1
2 Bedford Stuyvesant	0	0	0	0	0	0	0	0	0	0
3 Bensonhurst	0	0	0	0	0	0	0	0	0	0
4 Bergen Beach	0	0	0	0	0	0	0	0	0	0
5 Boerum Hill	2	0	0	1	0	0	0	3	0	0
6 Borough Park	0	0	1	0	0	0	0	0	0	0
7 Brighton Beach	0	0	0	0	0	0	0	0	0	0
8 Broadway Junction	0	0	0	0	0	0	0	0	0	0
9 Brooklyn Heights	4	0	1	0	0	0	0	0	0	2

For more information about the methodologies you can see the [full Notebook here](#).