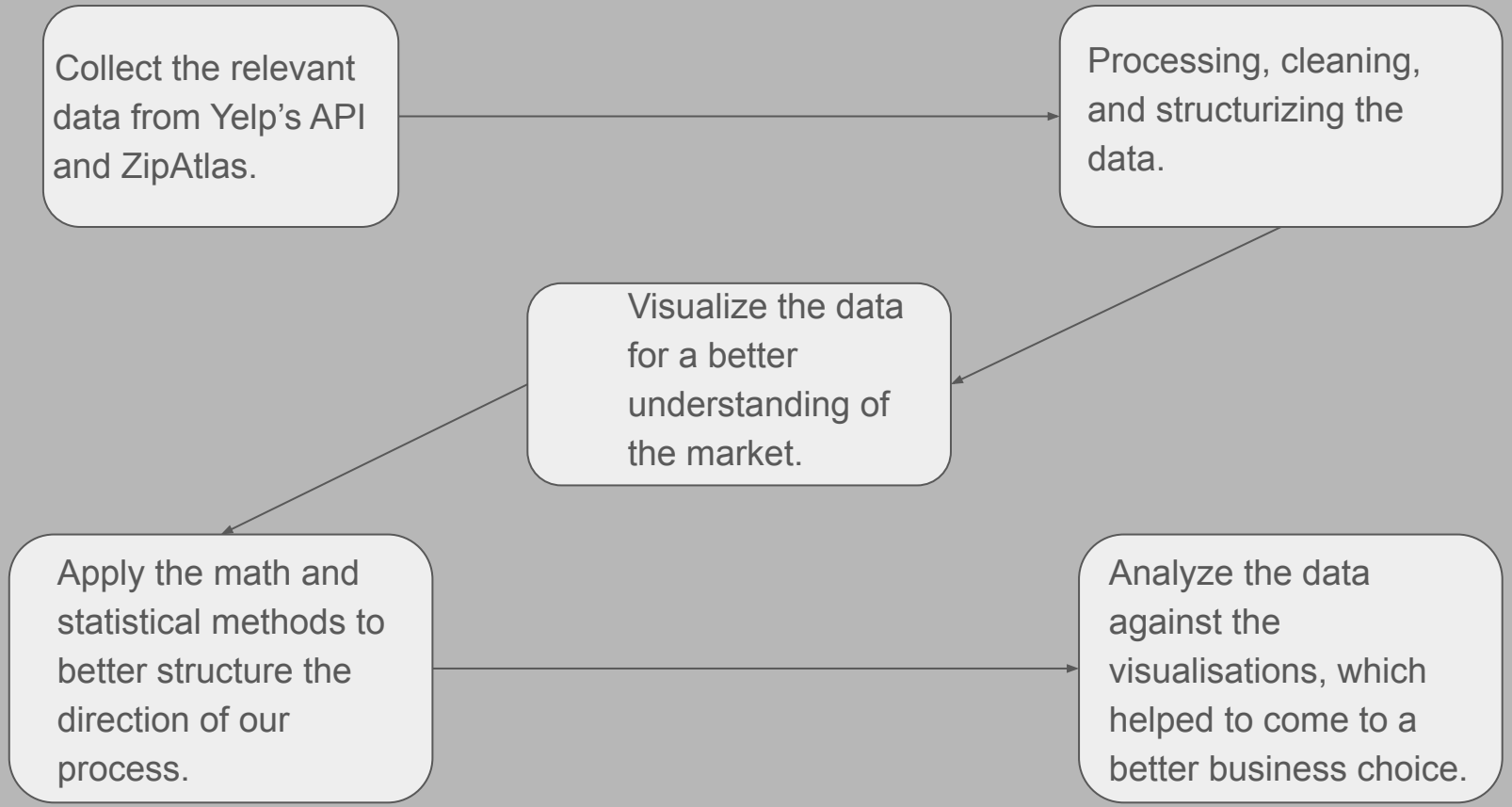
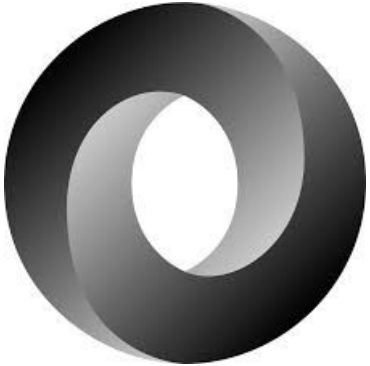
Optimizing Locations for a Shop between Boroughs in NYC

Where is the best geographical area for new Coffee Shop

Following steps to get to the best business results



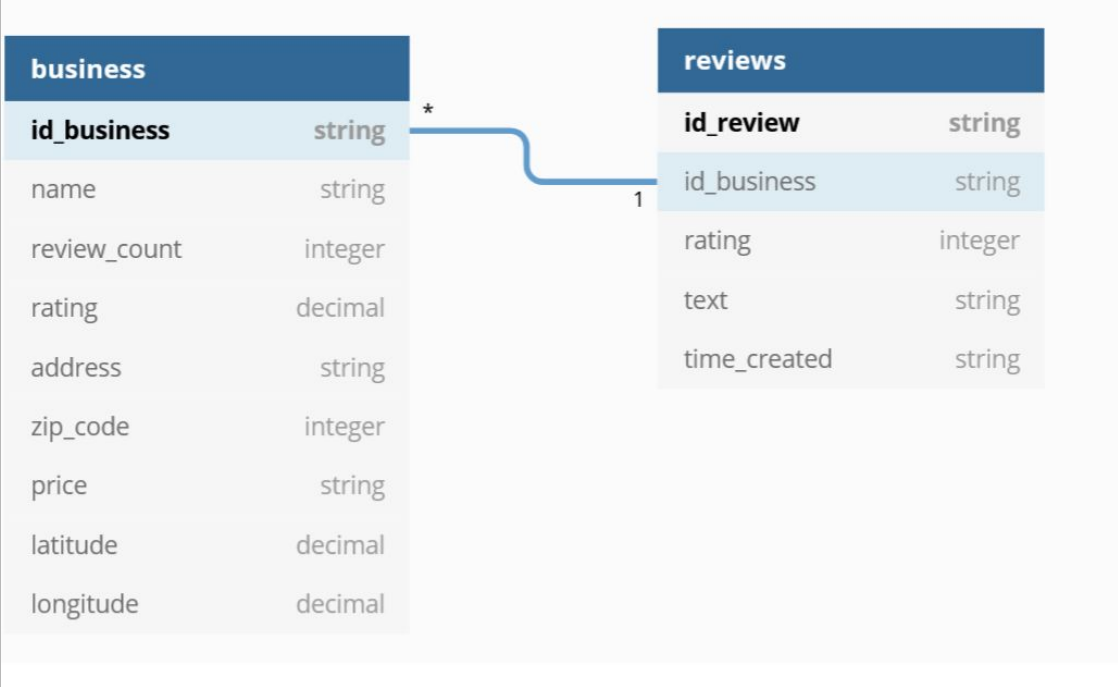
The libraries and methods we imported for our analysis



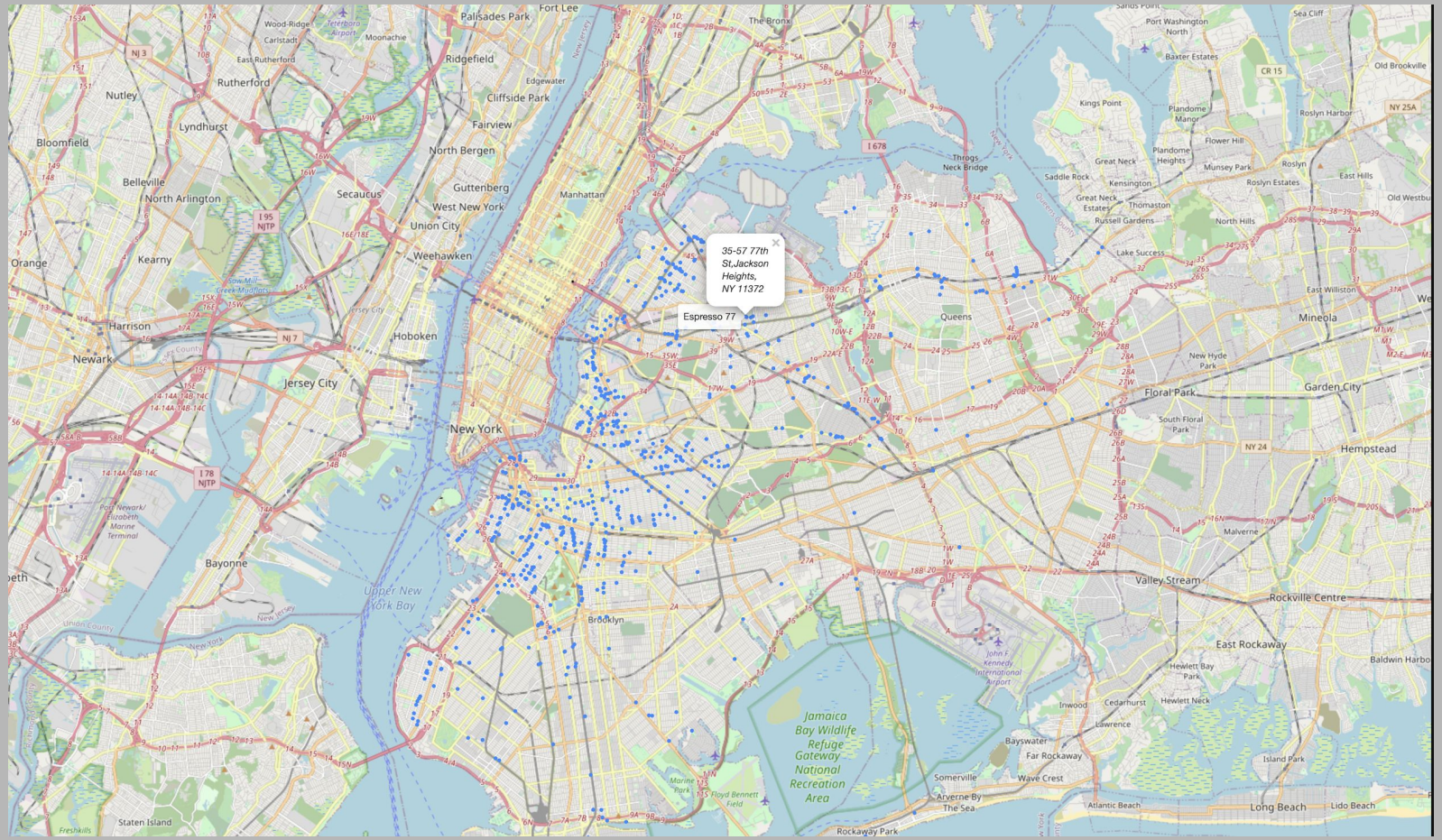
Folium

Schema for the tables DataBase

After collecting and processing the data we stored it in Tables of DataBase with relevant keys

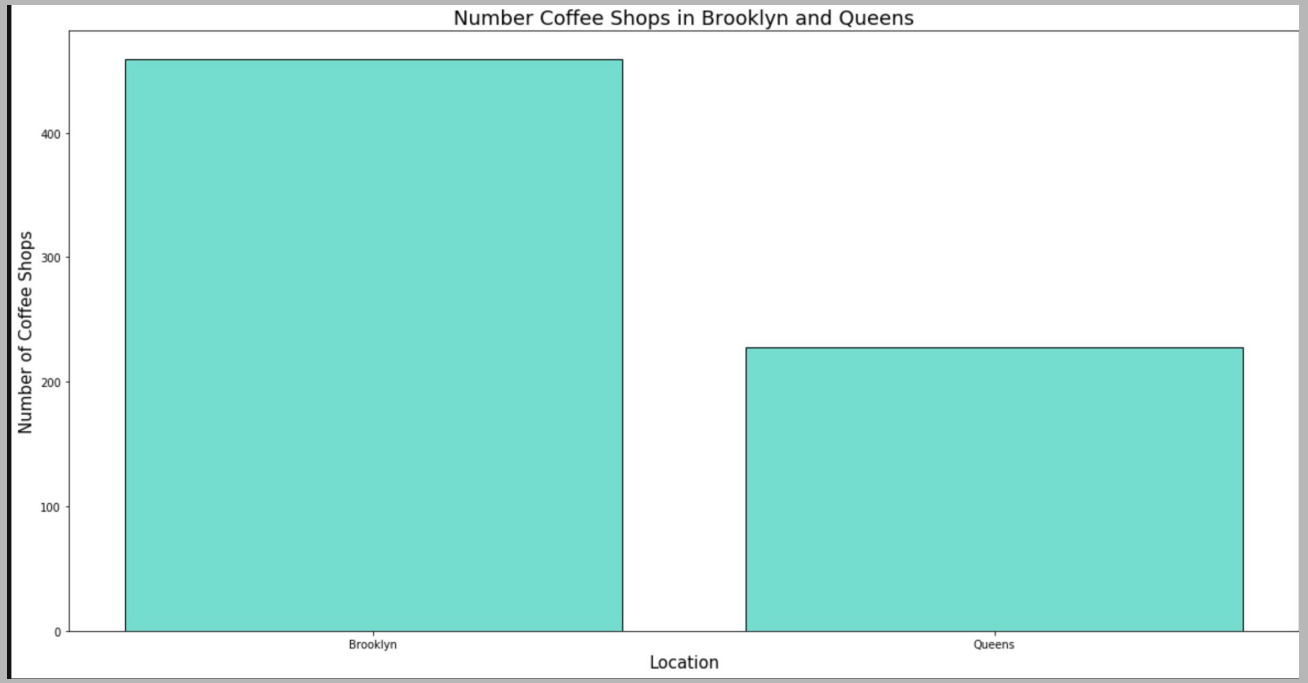


Heat Map of Coffee Shops of Brooklyn & Queens



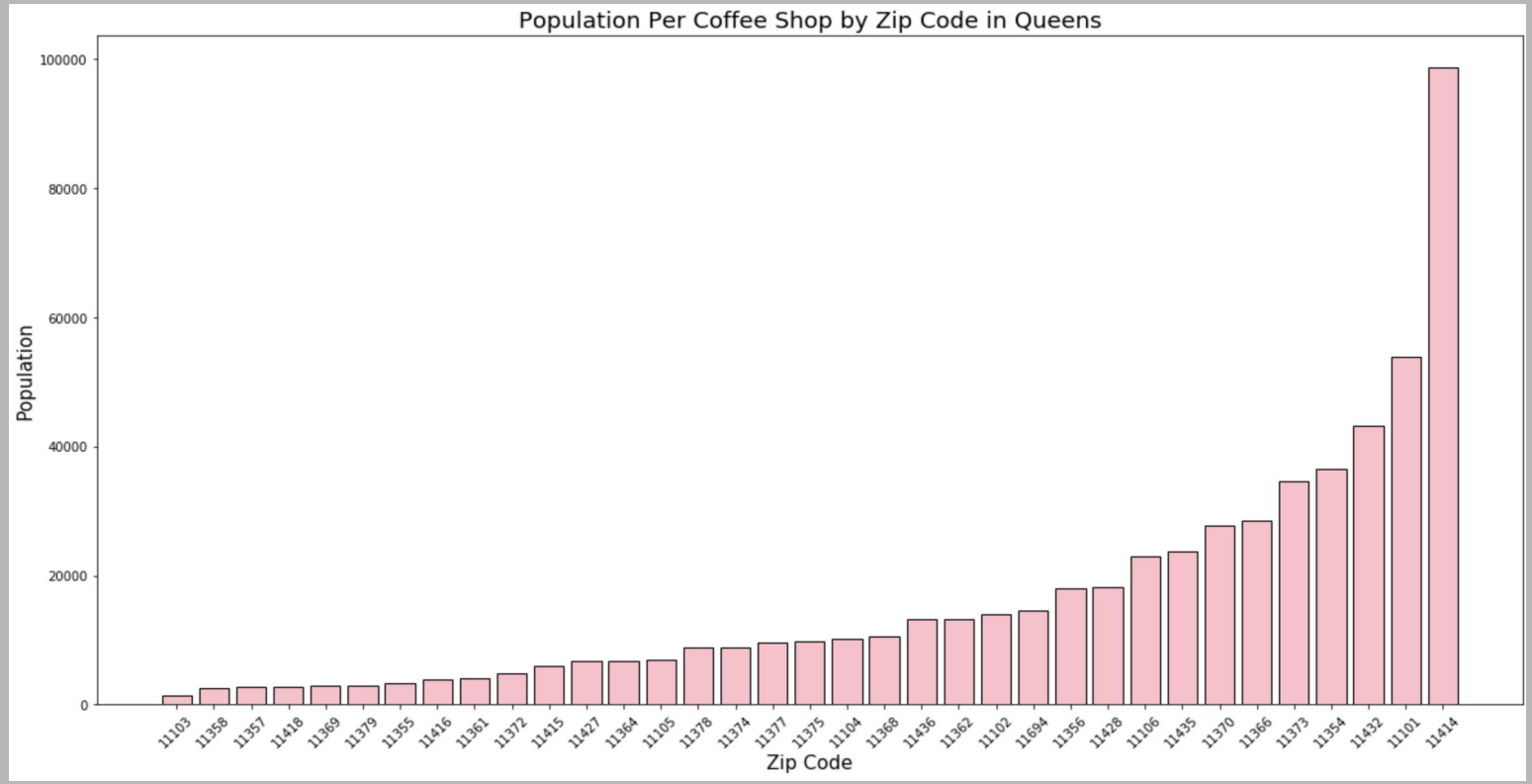
Bar Chart of the number of Coffee Shops in Brooklyn & Queens

We dive deeper with the math and stats to show that Queens was best since Brooklyn was oversaturated.



Population per Coffee Shop per Zip Code in Queens

Queens has many zip codes, so we figured to section the population of coffee shops by these zip codes.



Generating a score for each zip code in the region that combines population and business ratings and helps to rank the best zip codes based on the assumptions.

Defining coffee shops in Queens with Highest Score By using following acquisition :

$$Score_{bestzip} = population * w_{population} + rating * w_{rating}$$

$w_{population}$: relevance of population per coffeeshop

w_{rating}: relevance of average rating of zip code

	zip_code	customers_per_business	avg_rwiev_rating	score
34	11368	98841	3.50	79074
33	11435	53877	3.50	43102
32	11370	43142	4.50	34514
31	11418	36571	4.50	29258
30	11364	34539	4.50	27632
29	11432	28522	4.25	22818
28	11355	27760	3.67	22209
27	11416	23668	4.50	18935
26	11427	23014	4.50	18412
25	11436	18148	4.50	14519

With our code the desirability of a prospective coffee shop along either a preference for population, the average reviewer ratings, or neither produces a score for how much better a certain zip code is for your coffee shop.

Potential Refinements

Aggregate Price Factor into our future Code.

Make Program Functions more Dynamic (more than Coffee Shops).

THANK YOU!

Questions?

https://github.com/GuyMonahan

https://github.com/vanitoz