



The best location in  
Bogota, Colombia  
for a vegetarian  
restaurant

# Why vegetarian?

# Why Bogota?



Plant-based food sales exceeded 3.1 billion in 2019 (Gallup).



Bogota is becoming a tourist hotspot, must cater to vegetarians.



Only 6% of all Bogota restaurants are vegetarian

# Target population

- Veggie-minded millennials
- Who regularly eat out

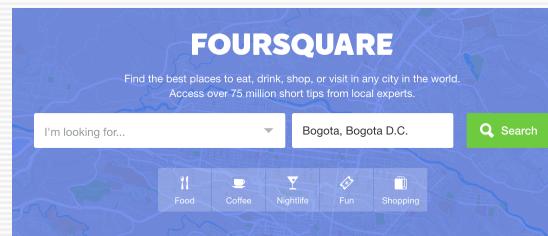




# Data



- Demographic data (number of people / age group per borough)
- Geographical data (latitude / longitude per borough)
- Econometrical data (GDP per capita per borough)



- Venue information

# Methods



Data wrangling



Exploratory analysis



K-means clustering

# Data wrangling

Subsetted specific columns

Period separators removed from numeric data

Demographic data > 2019 only

Age groups reclassified (millennials / non-millennials)

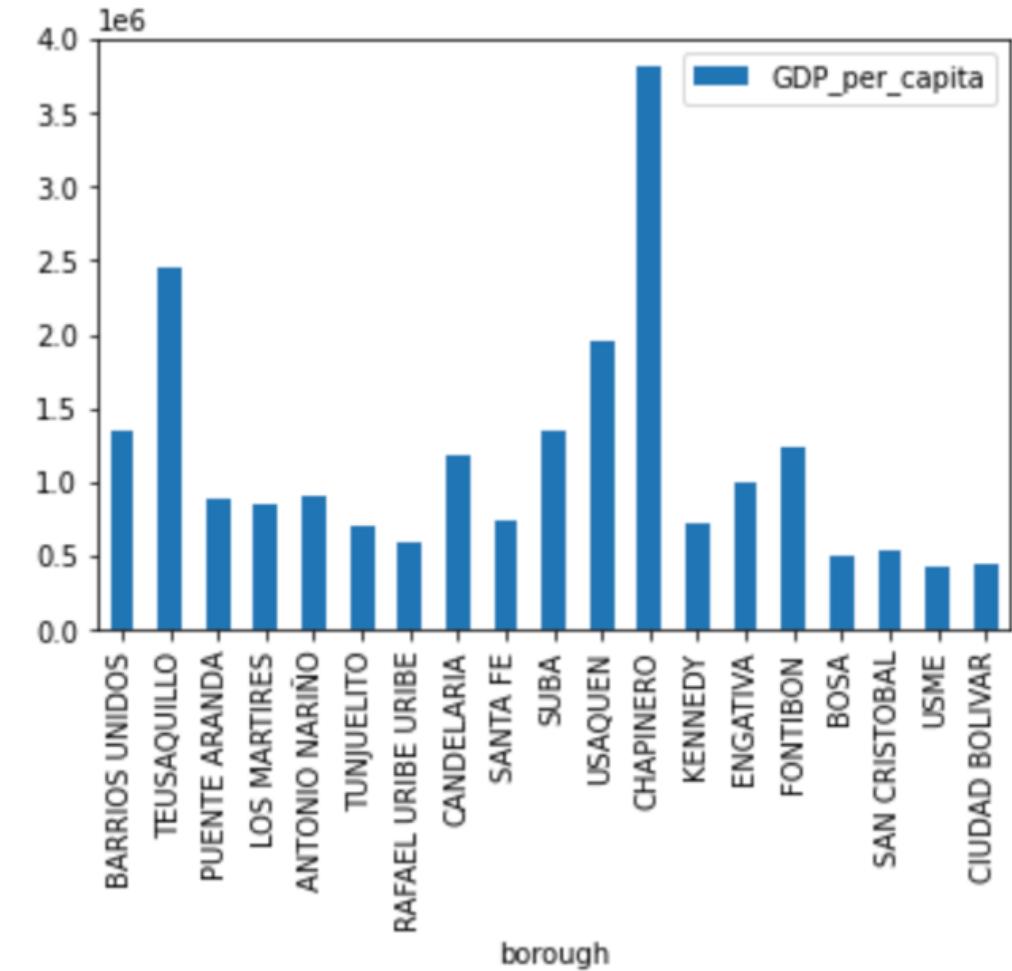
## Exploratory analysis

Which are the  
wealthiest  
boroughs?

Which borough has  
the largest proportion  
of millennials?

Which are the wealthiest  
boroughs?

- Chapinero
- Teusaquillo
- Usaquen
- . Suba

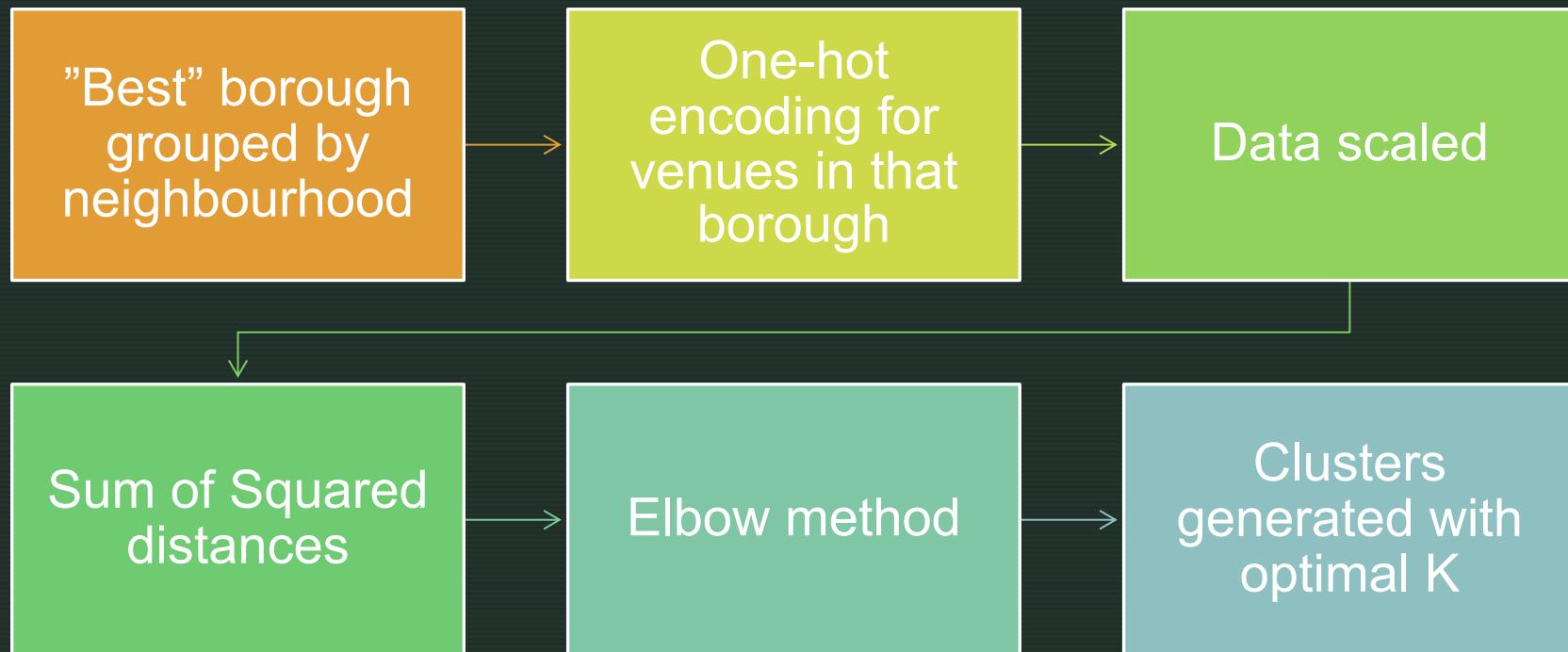


Which borough  
has the largest  
proportion of  
millennials?

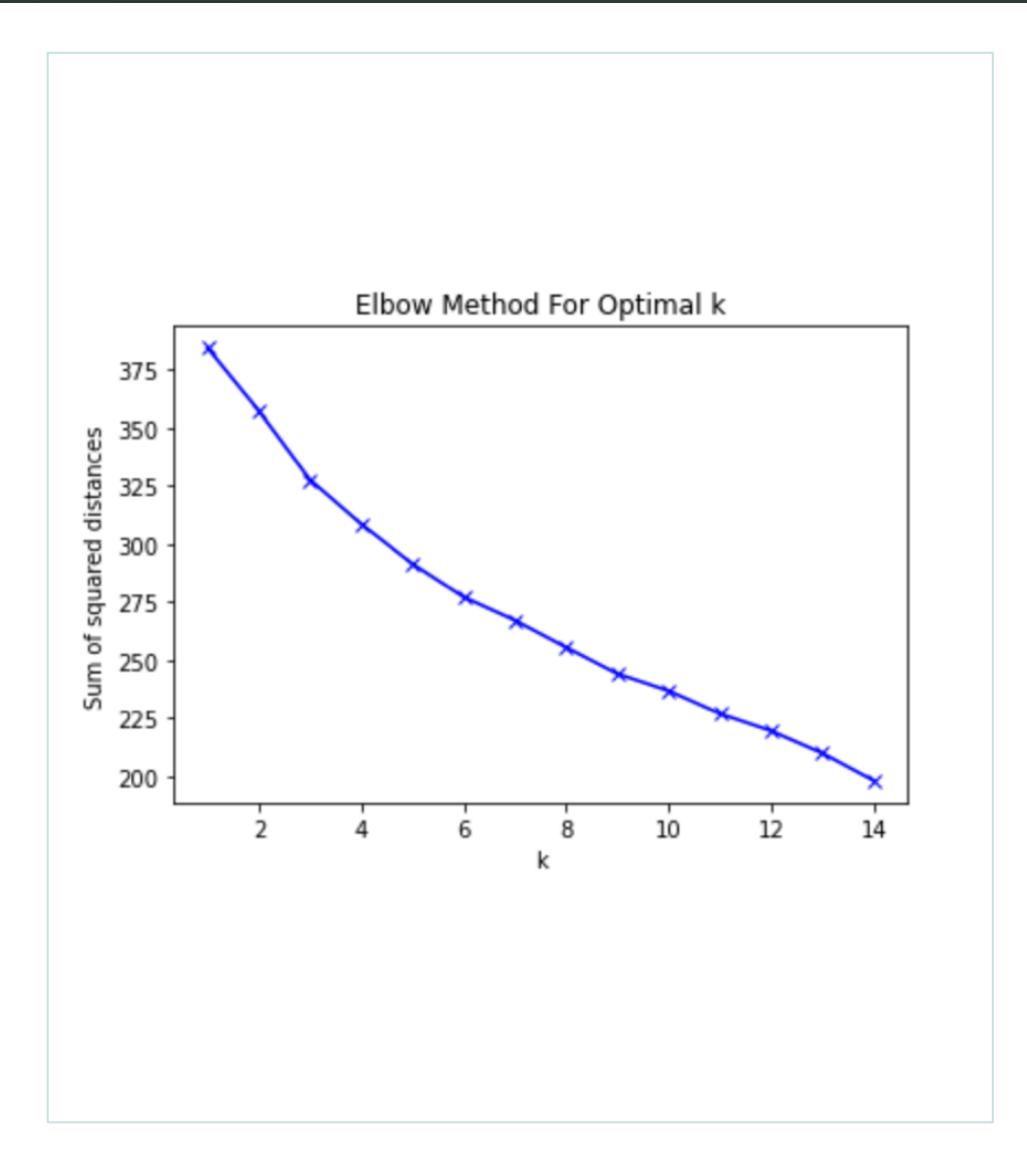
Chapinero

borough	age_group	total	
		millennial	non-millennial
ANTONIO NARIÑO	millennial	22.163257	77.836743
BARRIOS UNIDOS	millennial	22.064332	77.935668
BOSA	millennial	24.277947	75.722053
CANDELARIA	millennial	24.363686	75.636314
CHAPINERO	millennial	25.027435	74.972565
CIUDAD BOLIVAR	millennial	23.734295	76.265705
ENGATIVA	millennial	23.787513	76.212487
FONTIBON	millennial	24.360680	75.639320
KENNEDY	millennial	23.987831	76.012169
LOS MARTIRES	millennial	22.927066	77.072934
PUENTE ARANDA	millennial	23.864381	76.135619
RAFAEL URIBE URIBE	millennial	23.472275	76.527725
SAN CRISTOBAL	millennial	23.544859	76.455141
SANTA FE	millennial	22.893286	77.106714
SUBA	millennial	24.131026	75.868974
SUMAPAZ	millennial	21.579562	78.420438
TEUSAQUILLO	millennial	23.776614	76.223386
TUNJUELITO	millennial	23.750291	76.249709
USAQUEN	millennial	23.237236	76.762764
USME	millennial	23.641481	76.358519

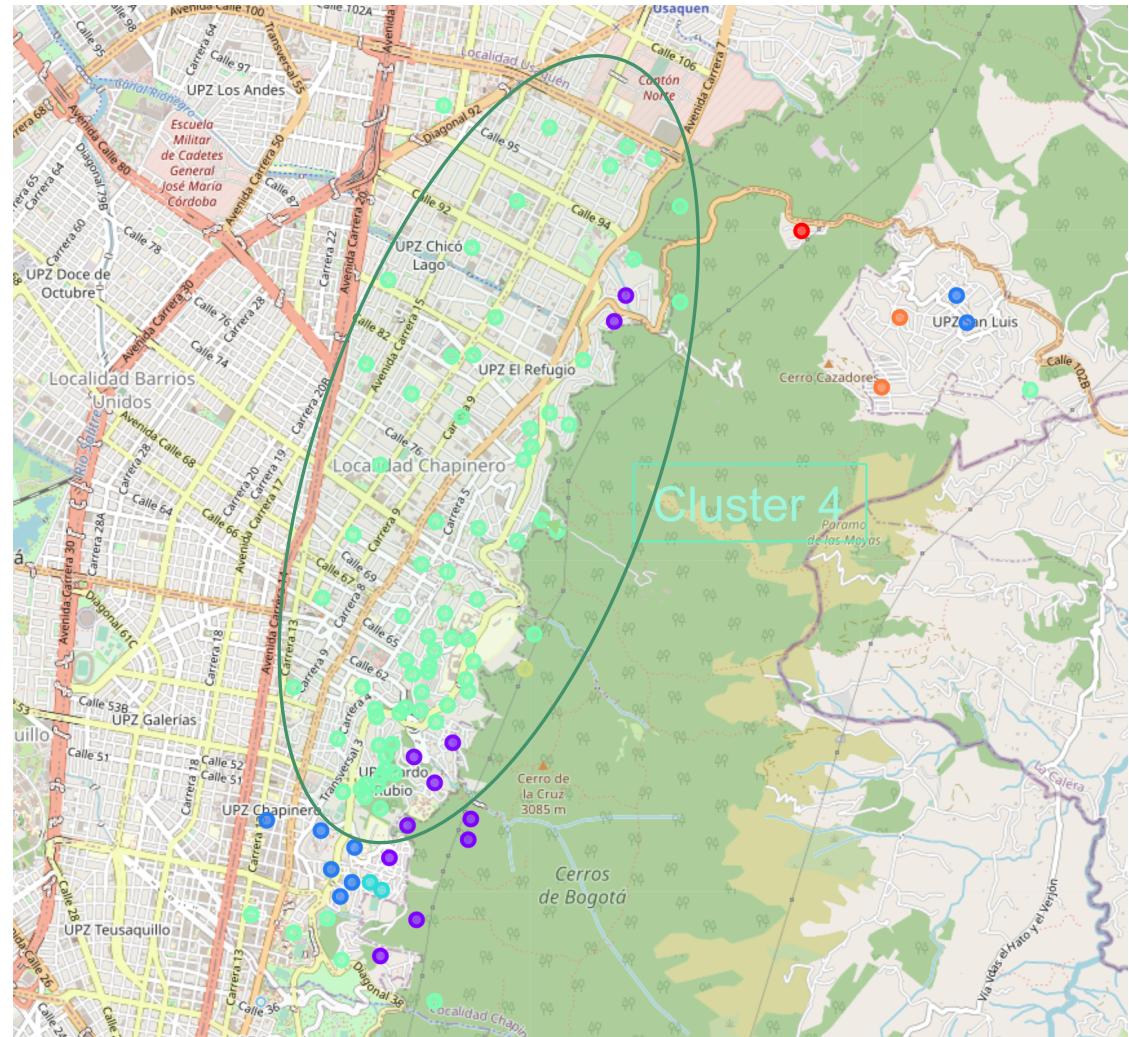
# K-means clustering



Elbow method:  
7 clusters



Chapinero clusters:  
Cluster 4 is "veggie friendly", as it was  
the only cluster  
with vegetarian  
options.



borough	neighbourhood_ID	neighbourhood	longitude	latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	
4675	CHAPINERO	20009	Bosque Calderón Tejada III Sector	-74.058127	4.643231	4	Restaurant	Italian Restaurant	Vegetarian / Vegan Restaurant	Beer Bar	Latin American Restaurant	Bakery	Japanese Restaurant	Mediterranean Restaurant	Burger Joint	Brewery
4743	CHAPINERO	20087	S.C. Quinta Camacho	-74.059584	4.654787	4	Coffee Shop	Restaurant	Latin American Restaurant	Burger Joint	Juice Bar	Sandwich Place	Hotel	Argentinian Restaurant	Vegetarian / Vegan Restaurant	Ice Cream Shop
4913	CHAPINERO	20115	Vista Hermosa - María Cristina	-74.055112	4.643116	4	Tea Room	Breakfast Spot	Mountain	Vegetarian / Vegan Restaurant	Trail	Pet Store	Café	Yoga Studio	Furniture / Home Store	Fried Chicken Joint
5151	CHAPINERO	20100	Siberia - Castillo Calderón Tejada	-74.056906	4.638949	4	Mediterranean Restaurant	Hot Dog Joint	Burger Joint	Beer Bar	Vegetarian / Vegan Restaurant	Latin American Restaurant	French Restaurant	Park	Food Court	Gaming Cafe
5168	CHAPINERO	20046	Los Olivos	-74.055019	4.644382	4	BBQ Joint	Japanese Restaurant	Trail	Pet Store	Café	Breakfast Spot	Tea Room	Theme Restaurant	Mountain	Vegetarian / Vegan Restaurant
5185	CHAPINERO	20002	Altos de la Cumbre	-74.055681	4.645510	4	Japanese Restaurant	BBQ Joint	Bakery	Café	Vegetarian / Vegan Restaurant	Herbs & Spices Store	Mexican Restaurant	Italian Restaurant	Ice Cream Shop	Hostel
5236	CHAPINERO	20099	Siberia - Bosque Calderón Tejada	-74.057722	4.638848	4	Ice Cream Shop	Vegetarian / Vegan Restaurant	Burger Joint	Beer Bar	French Restaurant	Lounge	Latin American Restaurant	Mediterranean Restaurant	Hot Dog Joint	Electronics Store
5338	CHAPINERO	20077	S.C. La Salle	-74.059023	4.644736	4	Restaurant	Vegetarian / Vegan Restaurant	Latin American Restaurant	Arepas Restaurant	Caribbean Restaurant	Café	Italian Restaurant	Bakery	BBQ Joint	Brewery
5678	CHAPINERO	20062	S.C. Chapinero Norte	-74.061635	4.650635	4	Soccer Field	Italian Restaurant	Vegetarian / Vegan Restaurant	Restaurant	Pizza Place	Latin American Restaurant	Nightclub	Caribbean Restaurant	Bistro	Bed & Breakfast
5780	CHAPINERO	20101	Siberia - El Capricho (Predio)	-74.057459	4.639204	4	Mediterranean Restaurant	Burger Joint	Hot Dog Joint	Café	Vegetarian / Vegan Restaurant	Latin American Restaurant	Beer Bar	Lounge	French Restaurant	Food Court
5899	CHAPINERO	20080	S.C. María Cristina	-74.056066	4.646474	4	Bakery	Café	Hotel	Japanese Restaurant	Pet Store	Mexican Restaurant	BBQ Joint	Vegetarian / Vegan Restaurant	Italian Restaurant	Restaurant
6154	CHAPINERO	20007	Bosque Calderón Tejada 2	-74.056557	4.642985	4	Japanese Restaurant	Tea Room	Brewery	Hot Dog Joint	Comfort Food Restaurant	Vegetarian / Vegan Restaurant	Lounge	Café	Gaming Cafe	Furniture / Home Store
6290	CHAPINERO	20043	La Portada	-74.056158	4.643320	4	Japanese Restaurant	Tea Room	Brewery	Hot Dog Joint	Vegetarian / Vegan Restaurant	Café	Lounge	Gaming Cafe	Furniture / Home Store	Fried Chicken Joint
6341	CHAPINERO	20039	Ingemar - Urb. Nuevo Asís	-74.058817	4.637443	4	Mediterranean Restaurant	Ice Cream Shop	Buffet	Burger Joint	Beer Bar	Vegetarian / Vegan Restaurant	Latin American Restaurant	French Restaurant	Food Court	Gaming Cafe
6358	CHAPINERO	20035	Ingemar - Arboretum	-74.057982	4.638152	4	Mediterranean Restaurant	Ice Cream Shop	Burger Joint	Beer Bar	Vegetarian / Vegan Restaurant	Latin American Restaurant	French Restaurant	Food Court	Gastropub	Gaming Cafe
6375	CHAPINERO	20037	Ingemar - El Triángulo	-74.058025	4.642703	4	Restaurant	Café	Beer Bar	Vegetarian / Vegan Restaurant	Bakery	Bistro	Brewery	Breakfast Spot	French Restaurant	Comfort Food Restaurant

Cluster 4 had vegetarian or vegan options in its top 10 venues. Los Olivos is the best option as vegan / vegetarian venues are in 10<sup>th</sup> place, so there may be less offer.

# So, where can I place my restaurant?

