

Comparing cities of the world

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1. Introduction

You might be a seasoned traveller that's been many places. You're a foodie and love theatres. You've travelled to many cities before and you don't really know where you would like to go next? Wouldn't it be nice to get new travel ideas? To find new cities based on how similar they are to the ones you liked in your previous travels?

Or, you might be a business man that travels around a world to sign deals. Everywhere you go, you need to take your futur clients out and entertain them to talk business in a relaxed setting. Wouldn't it be nice if you could know how similar the next city you're going to go to is to the ones you know already?

Usually, all these travels start with landing in a major city. Often, these are either country capitals or financial centres.

The problem we're going to solve is to answer these questions:

- How is one city similar to the others?
- What are the most common venues that set these cities appart?

And to answer these questions, we're going to compare and cluster capitals and financial centres based on the Foursquare API explore venues feature.

2. Data

The datasets we will need for this analysis are a list of capital cities and financial centres of the world. To build that list, we will scrape two pages from Wikipedia.

These pages are "List_of_national_capitals" and "Global_Financial_Centres_Index".

Next, we will need to get the venues in every city. For this, we will use the Foursquare API with the maximum setting of 100 000 meters. This will give us a range of 100 km to explore and will

cover an area that would be accessible to travellers and business men for a day trip by car or public transport.

To feed the Foursquare API, we will need the geographical coordinates for every city. Those will be provided using the geocoders Nominatim library.

2.1 Data cleaning

While building the dataset, we had to standardize city names. Some of them had comments or other additional information included in the name cell and had to be removed for the geocoders library to work. All of the unwanted information that was included in the city names was in between parentheses, so the data was cleaned by splitting the city names on the opening parentheses “(“ and building the data frame with the city name only.

3. Methodology

3.1 The data frame was built and the latitude and longitude was added to the dataset.

	City	Latitude	Longitude
0	New York City	40.712728	-74.006015
1	London	51.507322	-0.127647
2	Shanghai	31.232276	121.469207
3	Tokyo	35.682839	139.759455
4	Hong Kong	22.350627	114.184916

3.2 The venues were added to the data using the Foursquare API.

	City	Latitude	Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	New York City	40.712728	-74.006015	Aire Ancient Baths	40.718141	-74.004941	Spa
1	New York City	40.712728	-74.006015	9/11 Memorial North Pool	40.712077	-74.013187	Memorial Site
2	New York City	40.712728	-74.006015	Crown Shy	40.706187	-74.007490	Restaurant
3	New York City	40.712728	-74.006015	Los Tacos No. 1	40.714267	-74.008756	Taco Place
4	New York City	40.712728	-74.006015	The Rooftop @ Pier 17	40.705463	-74.001598	Music Venue

3.3 The venues were encoded using one hot encoding.

	Zoo Exhibit	Accessories Store	Adult Boutique	Advertising Agency	Afghan Restaurant	African Restaurant	Airport	Airport Food Court	Airport Lounge	Airport Service	...	Wine Bar	Wine Shop	Winery	Wings Joint
0	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0

5 rows x 566 columns

3.4 The venues were grouped.

	City	Zoo Exhibit	Accessories Store	Adult Boutique	Advertising Agency	Afghan Restaurant	African Restaurant	Airport	Airport Food Court	Airport Lounge	...	Wine Bar	Wine Shop	Winery	Wings Joint
0	Abidjan	0.00	0.000000	0.0	0.0	0.0	0.104167	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0
1	Abu Dhabi	0.00	0.000000	0.0	0.0	0.0	0.024390	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0
2	Abuja	0.00	0.017544	0.0	0.0	0.0	0.035088	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0
3	Accra	0.00	0.000000	0.0	0.0	0.0	0.046154	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0
4	Adamstown	0.00	0.000000	0.0	0.0	0.0	0.000000	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0
...
315	Yaoundé	0.00	0.000000	0.0	0.0	0.0	0.097561	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0
316	Yaren	0.00	0.000000	0.0	0.0	0.0	0.000000	0.25	0.0	0.0	...	0.00	0.0	0.00	0.0
317	Yerevan	0.00	0.000000	0.0	0.0	0.0	0.000000	0.01	0.0	0.0	...	0.01	0.0	0.01	0.0
318	Zagreb	0.00	0.000000	0.0	0.0	0.0	0.000000	0.00	0.0	0.0	...	0.01	0.0	0.00	0.0
319	Zurich	0.02	0.010000	0.0	0.0	0.0	0.000000	0.00	0.0	0.0	...	0.00	0.0	0.00	0.0

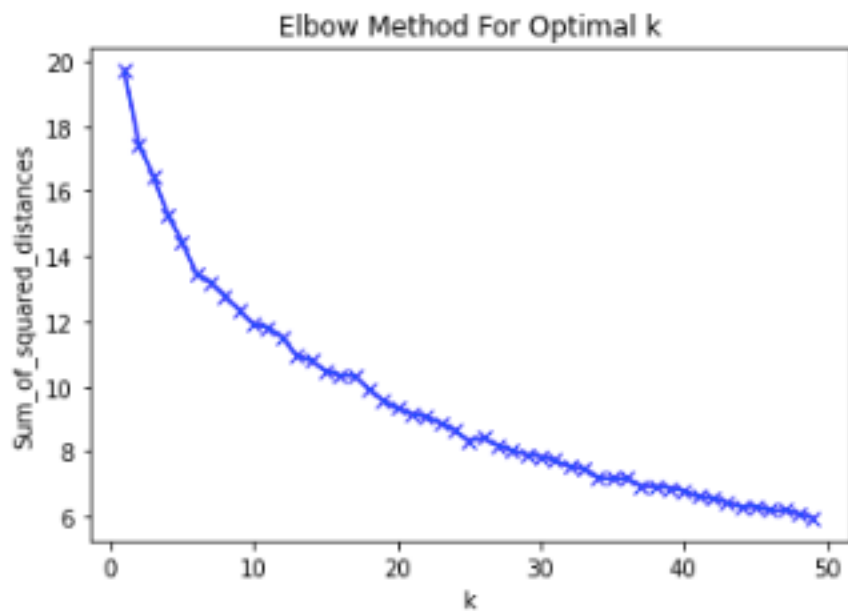
320 rows x 566 columns

3.5 The venues were sorted from most to least common.

	City	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Abidjan	African Restaurant	Nightclub	Shopping Mall	Hotel	Ice Cream Shop
1	Abu Dhabi	Hotel	Resort	Beach	Shopping Mall	Food Truck
2	Abuja	Fast Food Restaurant	Shopping Mall	Hotel	Bed & Breakfast	Restaurant
3	Accra	Hotel	Shopping Mall	Cocktail Bar	Pizza Place	African Restaurant
4	Adamstown	Nature Preserve	Zoo	Food Stand	Food Court	Food & Drink Shop

3.6 The K-Means machine learning algorithm was used to cluster the cities together.

3.6.1 The elbow method was used to find the best value for K.



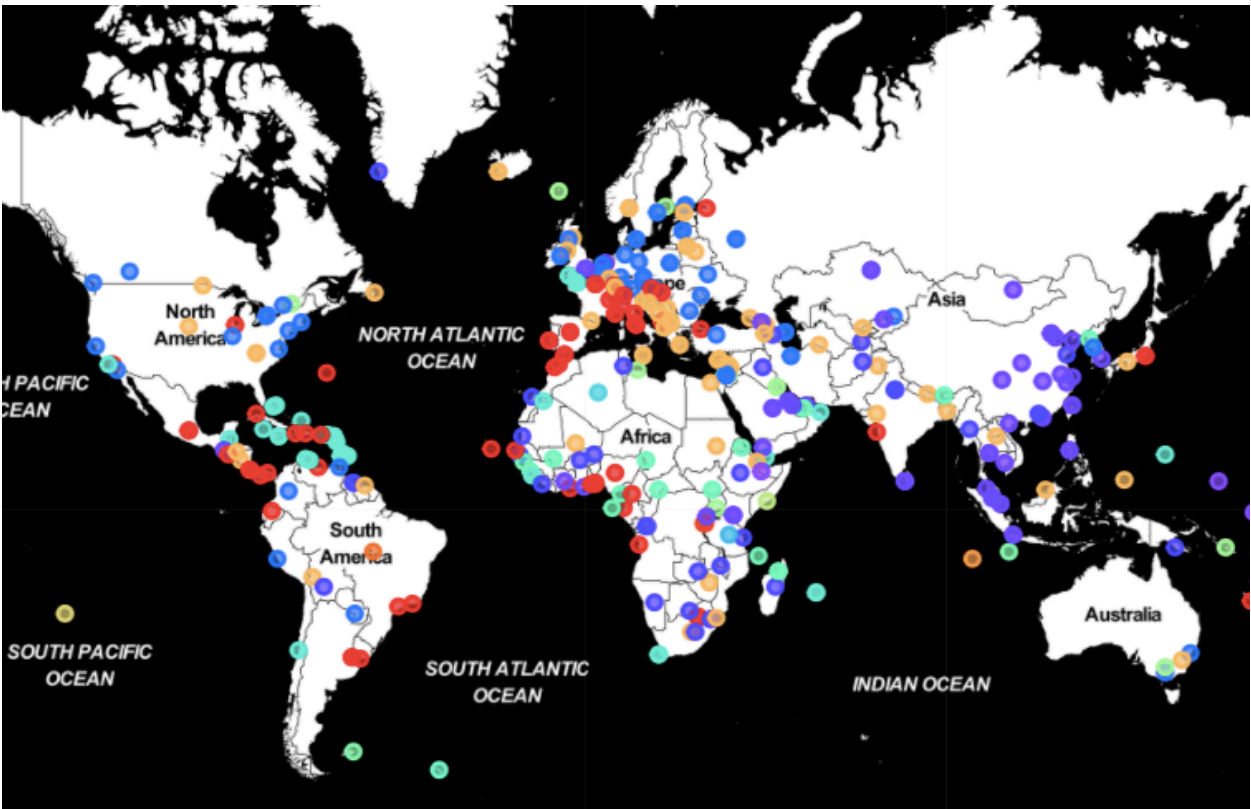
The line is pretty smooth without a clear elbow, but we can see that the curve flattens between K values of 10 to 20. Both 10 and 20 clusters were tried. 10 yielded large groups with less distinctive results so 20 was chosen as final value for K as it resulted in better insights.

3.7 Adding cluster labels to the data frame.

	City	Latitude	Longitude	Cluster Labels	(
0	New York City	40.712728	-74.006015	4	
1	London	51.507322	-0.127647	2	
2	Shanghai	31.232276	121.469207	2	
3	Tokyo	35.682839	139.759455	19	
4	Hong Kong	22.350627	114.184916	2	

4. Results

4.1 Cluster Map



4.1 Detailed Clusters

Cluster 0

	City	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
34	Mumbai	Indian Restaurant	Scenic Lookout	Ice Cream Shop	Hotel	Beach	Mountain	Seafood Restaurant	Coffee Shop	Fast Food Restaurant
45	Casablanca	Beach	Coffee Shop	Café	Bakery	Hotel	Moroccan Restaurant	French Restaurant	Diner	Italian Restaurant
60	Bermuda	Restaurant	Beach	Resort	Seafood Restaurant	Park	Bar	Museum	Hotel	Coffee Shop
74	Monaco	Hotel	Beach	French Restaurant	Garden	Mediterranean Restaurant	Ice Cream Shop	Park	Seafood Restaurant	Scenic Lookout
83	Gibraltar	Beach	Restaurant	Spanish Restaurant	Hotel	Seafood Restaurant	Cocktail Bar	Café	Golf Course	Other Great Outdoors
89	Johannesburg	Shopping Mall	Coffee Shop	Restaurant	Italian Restaurant	Hotel	Golf Course	Gym / Fitness Center	Deli / Bodega	Café
90	Panama	Hotel	Latin American Restaurant	Restaurant	Pizza Place	Shopping Mall	Resort	Supermarket	Peruvian Restaurant	Bakery
92	Santiago	Supermarket	Coffee Shop	Shopping Mall	Bakery	Hotel	Gym	Ice Cream Shop	French Restaurant	Café
111	Abidjan	African Restaurant	Nightclub	Shopping Mall	Hotel	Ice Cream Shop	Italian Restaurant	Lounge	Bar	Restaurant
114	Abuja	Fast Food Restaurant	Shopping Mall	Hotel	Bed & Breakfast	Restaurant	Indian Restaurant	Department Store	Fried Chicken Joint	Ice Cream Shop
152	Pretoria	Shopping Mall	Coffee Shop	Italian Restaurant	Hotel	Restaurant	Deli / Bodega	Golf Course	Café	African Restaurant
166	Caracas	Restaurant	Italian Restaurant	Bakery	Beach	Pizza Place	Ice Cream Shop	Steakhouse	Café	Dessert Shop

168	Cetinje	Hotel	Restaurant	Beach	Seafood Restaurant	Café	Mediterranean Restaurant	Pizza Place	Beach Bar	Mountain
169	Podgorica	Hotel	Restaurant	Beach	Seafood Restaurant	Café	Bar	Mediterranean Restaurant	Beach Bar	Lounge
177	Cotonou	Shopping Mall	Beach	Resort	French Restaurant	Hotel	Bakery	Hotel Bar	Plaza	Restaurant
178	Porto-Novo	Shopping Mall	Lounge	African Restaurant	Restaurant	Hotel	Ice Cream Shop	Beach	Resort	French Restaurant
179	Dakar	African Restaurant	Hotel	Restaurant	Pool	Shopping Mall	Resort	Seafood Restaurant	Ice Cream Shop	Beach
199	Gibraltar	Beach	Restaurant	Spanish Restaurant	Hotel	Seafood Restaurant	Cocktail Bar	Café	Golf Course	Other Great Outdoors
235	Libreville	Italian Restaurant	Restaurant	Bakery	Hotel	Beach	French Restaurant	Pizza Place	Nightclub	Resort
242	Lomé	Hotel	African Restaurant	Restaurant	Historic Site	Diner	Beach	Fast Food Restaurant	Bakery	Cocktail Bar
244	Luanda	Restaurant	Beach	Hotel	Ice Cream Shop	Lounge	Pizza Place	Seafood Restaurant	Coffee Shop	Portuguese Restaurant
277	Nouméa	Hotel	Resort	Beach	French Restaurant	Seafood Restaurant	Sports Bar	History Museum	Trail	Historic Site
287	Panama City	Supermarket	Bakery	Pharmacy	Coffee Shop	Deli / Bodega	Scenic Lookout	Shopping Mall	Hotel	Sushi Restaurant
288	Papeete	French Restaurant	Resort	Hotel	Beach Bar	Restaurant	Beach	Café	Theater	Supermarket
296	Port-au-Prince	Hotel	Resort	Supermarket	Hotel Bar	Restaurant	Beach	Coffee Shop	Japanese Restaurant	Pizza Place
299	Praia	Hotel	Restaurant	Beach	Bakery	African Restaurant	Comfort Food Restaurant	Scenic Lookout	Pizza Place	Park
303	Rabat	Coffee Shop	Beach	Bakery	Café	Moroccan Restaurant	Hotel	Italian Restaurant	French Restaurant	Lounge
311	San José	Supermarket	Shopping Mall	Coffee Shop	Bakery	Gym	Ice Cream Shop	Park	Grocery Store	Café
312	San Juan	Pizza Place	Bakery	Beach	Caribbean Restaurant	Coffee Shop	Hotel	Café	Plaza	Castle
314	San Salvador	Beach	Seafood Restaurant	Latin American Restaurant	Shopping Mall	Surf Spot	Hotel	Bakery	Park	Pizza Place
315	Santiago	Supermarket	Coffee Shop	Shopping Mall	Bakery	Hotel	Gym	Ice Cream Shop	French Restaurant	Café
317	Santo Domingo	Spanish Restaurant	Supermarket	Italian Restaurant	Gym	Hotel	Shopping Mall	Fast Food Restaurant	Bakery	Department Store
363	Yaoundé	Bakery	Hotel	African Restaurant	Bar	Nightclub	Lounge	Restaurant	Steakhouse	Piano Bar

Cluster 1

	City	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
208	Hargeisa	Hotel	Pizza Place	Zoo	Fish & Chips Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot	Fish Market
286	Palikir	Hotel	Airport	Zoo	Fish & Chips Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot	Fish Market
364	Yaren	Hotel	Beach	Airport	Zoo	Fish Market	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot

Cluster 2

	City	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
1	London	Hotel	Park	Art Museum	Department Store	Plaza	Garden	Bookstore	Theater	Cocktail Bar
2	Shanghai	Hotel	Bakery	Dumpling Restaurant	Italian Restaurant	Coffee Shop	Burger Joint	Shopping Mall	Gym / Fitness Center	Park
4	Hong Kong	Hotel	Park	Mountain	Café	Electronics Store	Coffee Shop	Thai Restaurant	Japanese Restaurant	Dessert Shop
5	Singapore	Hotel	Park	Japanese Restaurant	Bookstore	Cocktail Bar	Theme Park Ride / Attraction	Garden	Waterfront	Botanical Garden
6	Beijing	Hotel	Park	Historic Site	Shopping Mall	Brewery	Art Gallery	Bookstore	French Restaurant	Dumpling Restaurant
8	Shenzhen	Hotel	Theme Park Ride / Attraction	Mountain	Park	Japanese Restaurant	Coffee Shop	Café	Electronics Store	Art Gallery
16	Dubai	Hotel	Resort	Beach	Coffee Shop	Restaurant	Café	Plaza	Movie Theater	Multiplex
21	Amsterdam	Hotel	Park	Coffee Shop	Café	Breakfast Spot	Bakery	Yoga Studio	Bar	French Restaurant
39	Busan	Coffee Shop	Hotel	Park	Korean Restaurant	Trail	Market	Beach	Scenic Lookout	Department Store
40	Kuala Lumpur	Hotel	Shopping Mall	Malay Restaurant	Japanese Restaurant	Grocery Store	Restaurant	Coffee Shop	Asian Restaurant	Café
41	Taipei	Hotel	Dumpling Restaurant	Park	Taiwanese Restaurant	Japanese Restaurant	Scenic Lookout	Noodle House	Bookstore	Dessert Shop
42	Chengdu	Hotel	Shopping Mall	Coffee Shop	History Museum	Historic Site	Italian Restaurant	Hostel	Zoo Exhibit	Bookstore
55	Doha	Hotel	Café	Coffee Shop	Restaurant	Beach	Park	Resort	French Restaurant	Dessert Shop

57	Bangkok	Coffee Shop	Hotel	Thai Restaurant	Park	Japanese Restaurant	Shopping Mall	Bookstore	Supermarket	Spa
67	Liechtenstein	Hotel	Ski Area	Swiss Restaurant	Trail	German Restaurant	Ski Lodge	Park	Mountain	Zoo Exhibit
73	Nur-Sultan	Hotel	Coffee Shop	Restaurant	Gym / Fitness Center	Park	Asian Restaurant	Café	Gym	Shopping Mall
80	Jakarta	Hotel	Coffee Shop	Shopping Mall	Indonesian Restaurant	Clothing Store	Bakery	Sushi Restaurant	Asian Restaurant	Steakhouse
82	Bahrain	Coffee Shop	Hotel	Beach	Bakery	French Restaurant	Café	Plaza	American Restaurant	Trail
88	Nanjing	Hotel	Coffee Shop	Shopping Mall	Fast Food Restaurant	Train Station	Historic Site	Park	Burger Joint	Indian Restaurant
95	Nairobi	Hotel	Shopping Mall	Resort	Lounge	African Restaurant	Supermarket	Restaurant	Coffee Shop	Golf Course
104	Xi'an	Hotel	History Museum	Historic Site	Shopping Mall	Fast Food Restaurant	Chinese Restaurant	Hostel	Coffee Shop	Airport Terminal
105	Manila	Shopping Mall	Hotel	Clothing Store	Coffee Shop	Japanese Restaurant	Supermarket	Café	Steakhouse	Chinese Restaurant
106	Riyadh	Coffee Shop	Jewelry Store	Supermarket	Plaza	Hotel	Dessert Shop	Gym / Fitness Center	Gym	Sandwich Place
107	Tianjin	Coffee Shop	Hotel	Fast Food Restaurant	Shopping Mall	Electronics Store	American Restaurant	Pizza Place	Department Store	German Restaurant
108	Hangzhou	Hotel	Coffee Shop	Shopping Mall	Chinese Restaurant	Historic Site	Steakhouse	Trail	Zhejiang Restaurant	Plaza
109	Dalian	Coffee Shop	Hotel	Shopping Mall	Department Store	Café	Plaza	Fast Food Restaurant	Bar	Seafood Restaurant
110	Wuhan	Coffee Shop	Hotel	Shopping Mall	Train Station	Fast Food Restaurant	Plaza	Garden	Asian Restaurant	Concert Hall

112	Yamoussoukro	Hotel Pool	Hotel	Moving Target	African Restaurant	Resort	French Restaurant	Zoo	Flower Shop	Flea Market
115	Accra	Hotel	Shopping Mall	Cocktail Bar	Pizza Place	African Restaurant	Resort	Pub	Italian Restaurant	Snack Place
119	Sana'a	Coffee Shop	Café	Hotel	Pizza Place	Hookah Bar	Fast Food Restaurant	Shopping Mall	Indian Restaurant	Historic Site
123	Amsterdam	Hotel	Park	Coffee Shop	Café	Breakfast Spot	Bakery	Yoga Studio	Bar	French Restaurant
148	Bishkek	Hotel	Coffee Shop	Asian Restaurant	Park	Café	Shopping Mall	Restaurant	Mountain	Gym
173	Colombo	Hotel	Café	Coffee Shop	Resort	IT Services	Shopping Mall	Clothing Store	Beach	Dessert Shop
174	Sri Jayawardenepura Kotte	Hotel	Café	Coffee Shop	Resort	IT Services	Clothing Store	Beach	Shopping Mall	Dessert Shop
196	George Town	Hotel	Café	Chinese Restaurant	Coffee Shop	Japanese Restaurant	Clothing Store	Bakery	Wine Bar	Park
202	Guatemala City	Hotel	Café	Steakhouse	Coffee Shop	Shopping Mall	Bakery	Restaurant	Plaza	Italian Restaurant
206	Hanoi	Hotel	Coffee Shop	Vietnamese Restaurant	Noodle House	Resort	Golf Course	Pizza Place	Ice Cream Shop	BBQ Joint
223	Kigali	Hotel	Coffee Shop	Café	Resort	African Restaurant	Bakery	National Park	Lounge	Grocery Store
229	Kuala Lumpur	Hotel	Shopping Mall	Malay Restaurant	Japanese Restaurant	Grocery Store	Restaurant	Coffee Shop	Asian Restaurant	Café
230	Putrajaya	Hotel	Shopping Mall	Café	Restaurant	Ice Cream Shop	Golf Course	Asian Restaurant	Sporting Goods Shop	Coffee Shop
252	Manama	Coffee Shop	Hotel	Bakery	Trail	French Restaurant	Plaza	Café	American Restaurant	Chocolate Shop
292	Phnom Penh	Hotel	Cambodian Restaurant	Café	Coffee Shop	Asian Restaurant	French Restaurant	Vegetarian / Vegan Restaurant	Mountain	Resort
335	Taipei	Hotel	Dumpling Restaurant	Park	Taiwanese Restaurant	Japanese Restaurant	Scenic Lookout	Noodle House	Bookstore	Dessert Shop
346	Tskhinvali	Hotel	Mountain	Restaurant	Wine Bar	Ski Chairlift	Café	Historic Site	Bakery	Ski Area
348	Ulaanbaatar	Coffee Shop	Hotel	National Park	Movie Theater	Japanese Restaurant	Soup Place	New American Restaurant	Fast Food Restaurant	Restaurant

Cluster 3

	City	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
20	Guangzhou	Hotel	Shopping Mall	Park	Electronics Store	Shopping Plaza	Golf Course	Turkish Restaurant	Resort	Spa
46	Qingdao	Hotel	Shopping Mall	Bar	Coffee Shop	Department Store	Aquarium	Café	Beach	Mountain
48	New Delhi	Hotel	Indian Restaurant	Café	Shopping Mall	Market	Italian Restaurant	Plaza	Restaurant	Monument / Landmark
117	Addis Ababa	Hotel	Italian Restaurant	Ethiopian Restaurant	Café	Restaurant	Pizza Place	Coffee Shop	Bar	Turkish Restaurant
127	Antananarivo	Hotel	Restaurant	French Restaurant	Shopping Mall	African Restaurant	Asian Restaurant	Bar	Sushi Restaurant	Café
128	Apia	Hotel	Department Store	Cocktail Bar	Restaurant	Burger Joint	Hotel Bar	Indian Restaurant	Movie Theater	Café
134	Baghdad	Hotel	Café	Historic Site	Middle Eastern Restaurant	Burger Joint	Shopping Mall	Bakery	Fast Food Restaurant	Ice Cream Shop
140	Banjul	Hotel	Resort	African Restaurant	Café	Restaurant	Nature Preserve	Tapas Restaurant	Market	Tree
158	Brazzaville	Hotel	Fast Food Restaurant	Restaurant	Café	Portuguese Restaurant	Lounge	Pool	Plaza	Pizza Place
181	Dar es Salaam	Hotel	Restaurant	Resort	Beach	Bar	Shopping Mall	Coffee Shop	African Restaurant	Seafood Restaurant
184	Dili	Hotel	Indian Restaurant	Café	Shopping Mall	Market	Italian Restaurant	Plaza	Restaurant	Monument / Landmark
189	Dushanbe	Hotel	Café	Restaurant	Nightclub	Department Store	Turkish Restaurant	Park	Middle Eastern Restaurant	Beer Garden

190	El Aaiún	Hotel	Pier	Pizza Place	Café	Arcade	Halal Restaurant	Fish Market	Fondue Restaurant	Flower Shop
195	Gaborone	Hotel	Shopping Mall	Portuguese Restaurant	Café	Coffee Shop	Cocktail Bar	Restaurant	Asian Restaurant	Seafood Restaurant
197	Georgetown	Hotel	Shopping Mall	Chinese Restaurant	Airport	Lounge	Fast Food Restaurant	Hotel Bar	Café	Supermarket
219	Kabul	Hotel	Café	Afghan Restaurant	Gym	Italian Restaurant	Shopping Mall	Restaurant	Burger Joint	Fried Chicken Joint
228	Kinshasa	Hotel	Fast Food Restaurant	Restaurant	Café	Portuguese Restaurant	Lounge	Pool	Plaza	Pizza Place
234	Sucre	Hotel	South American Restaurant	Hostel	Café	Restaurant	French Restaurant	Plaza	Market	History Museum
236	Lilongwe	Hotel	Shopping Mall	Café	Golf Course	Flea Market	Pub	Hotel Bar	Lake	Airport Terminal
240	Lobamba	Hotel	Restaurant	Burger Joint	Shopping Mall	Airport	Arts & Crafts Store	Music Venue	Nature Preserve	Steakhouse
241	Mbabane	Hotel	Restaurant	Grocery Store	Shopping Mall	Bed & Breakfast	Burger Joint	Airport	Arts & Crafts Store	Pub
245	Lusaka	Hotel	Shopping Mall	Café	Restaurant	Seafood Restaurant	Italian Restaurant	Fast Food Restaurant	Steakhouse	Gourmet Shop
257	Maseru	Hotel	Shopping Mall	Portuguese Restaurant	Restaurant	Farm	Airport	Bed & Breakfast	Casino	Flower Shop
263	Monrovia	Hotel	Beach	Restaurant	Hotel Bar	Sushi Restaurant	Tourist Information Center	Bar	Cocktail Bar	Coffee Shop
270	Naypyidaw	Hotel	Asian Restaurant	Resort	Restaurant	Shopping Mall	Thai Restaurant	Water Park	Bakery	Travel Lounge
274	Niamey	Hotel	Italian Restaurant	Fabric Shop	Fast Food Restaurant	Turkish Restaurant	Café	Convenience Store	Soccer Stadium	French Restaurant
276	Nouakchott	Hotel	Restaurant	Café	Market	Grocery Store	Nudist Beach	Fast Food Restaurant	Airport	Peruvian Restaurant
278	Nuku'alofa	Hotel	Pub	Bar	Farmers Market	Café	Paper / Office Supplies Store	Airport Terminal	Flea Market	Food & Drink Shop
280	Nuuk	General Entertainment	Café	Airport	Hotel	Food & Drink Shop	Shopping Mall	Fish Market	Fondue Restaurant	Flower Shop
284	Ouagadougou	Hotel	African Restaurant	Nightclub	Bar	Breakfast Spot	Restaurant	Airport	Coffee Shop	Lebanese Restaurant
294	Port Moresby	Hotel	Asian Restaurant	Chinese Restaurant	Pizza Place	Market	Café	Harbor / Marina	Shopping Mall	Airport
295	Port Vila	Resort	Café	Hotel	American Restaurant	Restaurant	Beer Garden	Bathing Area	Zoo	Food
331	Stepanakert	Hotel	Café	Restaurant	Waterfall	Park	Historic Site	Rest Area	Nature Preserve	Big Box Store
347	Tunis	Café	Hotel	Scenic Lookout	Resort	Forest	Food	Tea Room	Moving Target	Fish Market
362	Windhoek	Hotel	Café	Restaurant	Resort	Steakhouse	Italian Restaurant	Shopping Mall	African Restaurant	Convenience Store

Cluster 4

	City	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
0	New York City	Park	Bookstore	Ice Cream Shop	Scenic Lookout	Pier	Wine Shop	Garden	Thai Restaurant	American Restaurant
7	San Francisco	Park	Coffee Shop	Bakery	Yoga Studio	Bookstore	Grocery Store	Garden	Market	Art Museum
9	Zurich	Swiss Restaurant	Café	Park	Hotel	Bar	Cocktail Bar	Bakery	Coffee Shop	Pool
14	Boston	Park	Bakery	Mexican Restaurant	Brewery	Bookstore	Seafood Restaurant	Wine Shop	Café	Trail
15	Frankfurt	Park	Café	Hotel	Art Museum	Coffee Shop	Apple Wine Pub	Wine Bar	German Restaurant	Supermarket
22	Stockholm	Scandinavian Restaurant	Café	Park	Coffee Shop	Beer Bar	Bakery	Hotel	Cocktail Bar	Plaza
23	Vancouver	Park	Beach	Trail	Hotel	Ice Cream Shop	Japanese Restaurant	Coffee Shop	Bakery	Taco Place
24	Seoul	Park	BBQ Joint	Coffee Shop	Hotel	Sushi Restaurant	Bakery	Trail	Korean Restaurant	Chinese Restaurant
26	Melbourne	Café	Park	Coffee Shop	Bakery	Beach	Wine Bar	Ice Cream Shop	Cocktail Bar	Plaza
28	Hamburg	Coffee Shop	Café	Park	Ice Cream Shop	Bakery	Wine Bar	Cocktail Bar	Vietnamese Restaurant	Theater
29	Brussels	Coffee Shop	Bar	French Restaurant	Park	Ice Cream Shop	State / Provincial Park	Italian Restaurant	Sandwich Place	Spa
30	Toronto	Park	Coffee Shop	Bakery	Brewery	Café	Pizza Place	Farmers Market	Sandwich Place	Mediterranean Restaurant
31	Sydney	Park	Beach	Theater	Café	Bakery	Coffee Shop	Bar	Scenic Lookout	Ice Cream Shop
33	Dublin	Café	Park	Coffee Shop	Pub	Restaurant	Hotel	Indie Movie Theater	Beach	Stadium
35	Copenhagen	Coffee Shop	Beer Bar	Bakery	Scandinavian Restaurant	Park	Café	Cocktail Bar	Ice Cream Shop	Theater
36	Stuttgart	Park	Café	Italian Restaurant	Plaza	Palace	Bar	German Restaurant	Cocktail Bar	Ice Cream Shop
47	Munich	Café	Park	Ice Cream Shop	Plaza	German Restaurant	Beer Garden	Hotel	Coffee Shop	Cocktail Bar
50	Calgary	Park	Restaurant	Coffee Shop	Café	Pizza Place	Hotel	Grocery Store	Bakery	Diner
51	Glasgow	Park	Bar	Hotel	Coffee Shop	Café	Gastropub	Italian Restaurant	Indian Restaurant	Restaurant
56	Warsaw	Park	Coffee Shop	Cocktail Bar	Café	Hotel	Sushi Restaurant	Thai Restaurant	Ice Cream Shop	Plaza

59	San Diego	Park	Beach	Zoo Exhibit	Farmers Market	Brewery	Seafood Restaurant	Fast Food Restaurant	Ice Cream Shop	Grocery Store
61	Moscow	Park	Hotel	Theater	Road	Yoga Studio	Garden	Scenic Lookout	Movie Theater	Plaza
64	Helsinki	Café	Park	Coffee Shop	Scandinavian Restaurant	Pizza Place	Cocktail Bar	Beach	Bakery	Sauna / Steam Room
65	Prague	Café	Park	Coffee Shop	Bakery	Bistro	Cocktail Bar	Indie Movie Theater	Ice Cream Shop	Hotel
86	Bratislava	Park	Café	Coffee Shop	Wine Bar	Hotel	Vietnamese Restaurant	Plaza	Thai Restaurant	Ice Cream Shop
96	Riga	Park	Bar	Café	Gym / Fitness Center	Gym	Plaza	Wine Bar	Hotel	Pedestrian Plaza
97	Baku	Park	Hotel	Restaurant	Plaza	Coffee Shop	Turkish Restaurant	Historic Site	Café	Bakery
98	Almaty	Coffee Shop	Park	Shopping Mall	Steakhouse	Café	Gym / Fitness Center	Italian Restaurant	Restaurant	Seafood Restaurant
101	Tehran	Pastry Shop	Bookstore	Park	Ice Cream Shop	Flower Shop	Bakery	Coffee Shop	Supermarket	Theater
124	The Hague	Coffee Shop	Park	Hotel	Ice Cream Shop	Café	Beach	Restaurant	French Restaurant	Movie Theater
126	Ankara	Park	History Museum	Dance Studio	Sandwich Place	Hotel	Seafood Restaurant	Chocolate Shop	Theater	Café
131	Asunción	Ice Cream Shop	Gym / Fitness Center	Gym	South American Restaurant	Park	Café	Dessert Shop	Shopping Mall	Restaurant
146	Berlin	Park	Coffee Shop	Ice Cream Shop	Wine Bar	Bookstore	Café	Indie Movie Theater	Hotel	Gourmet Shop
153	Bogotá	Park	Coffee Shop	Hotel	Asian Restaurant	Bakery	Shopping Mall	Department Store	BBQ Joint	French Restaurant
161	Bucharest	Coffee Shop	Park	Dessert Shop	Hotel	Gym	Café	Gym / Fitness Center	Bar	Lounge
171	Chişinău	Hotel	Park	Café	Romanian Restaurant	Gym / Fitness Center	Supermarket	Coffee Shop	Modern European Restaurant	Pub
187	Douglas	Mexican Restaurant	Park	Burger Joint	Pizza Place	Grocery Store	BBQ Joint	Italian Restaurant	Cosmetics Shop	Bar
205	Hamilton	Park	Bakery	Brewery	Café	Pizza Place	Ice Cream Shop	Coffee Shop	Grocery Store	Sandwich Place
214	Jamestown	Brewery	Park	History Museum	Fast Food Restaurant	Theme Park	Beach	Grocery Store	Supermarket	Deli / Bodega
215	Jerusalem	Hotel	Beach	Park	Bar	Café	Historic Site	Ice Cream Shop	Coffee Shop	Falafel Restaurant
217	Ramallah	Hotel	Park	Bar	Beach	Café	Historic Site	Bakery	Coffee Shop	Ice Cream Shop
232	Kyiv	Coffee Shop	Park	Caucasian Restaurant	Hotel	Theater	Cocktail Bar	Gym / Fitness Center	Bakery	Salon / Barbershop
237	Lima	Park	Peruvian Restaurant	Bakery	Hotel	Seafood Restaurant	Café	Ice Cream Shop	Restaurant	Steakhouse
283	Ottawa	Park	Brewery	Hotel	Coffee Shop	Ice Cream Shop	Café	Gastropub	French Restaurant	Pub
297	Port of Spain	Bakery	Gym	Food Truck	Ice Cream Shop	Pharmacy	Scenic Lookout	Sushi Restaurant	Grocery Store	Park

Cluster 5

	City	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
324	South Tarawa	Motel	Airport	Zoo	Fishing Spot	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fish Market

Cluster 6

	City	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
182	Dodoma	Rental Car Location	Bar	Pizza Place	Hotel	Filipino Restaurant	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot	Fish Market

Cluster 7

	City	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
120	Algiers	Gaming Cafe	Arcade	Zoo	Fish Market	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot

Cluster 8

	City	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
44	Tel Aviv	Beach	Café	Park	Ice Cream Shop	Coffee Shop	Bakery	Bar	Asian Restaurant	Seafood Restaurant	Middle Eastern Restaurant
54	Jersey	Beach	Hotel	Historic Site	Restaurant	French Restaurant	Scenic Lookout	History Museum	Creperie	Surf Spot	Seafood Restaurant
62	Mauritius	Resort	Beach	Hotel	Café	Park	Surf Spot	Chinese Restaurant	Shopping Mall	Indian Restaurant	Golf Course
66	Cape Town	Beach	Hotel	Coffee Shop	Café	Trail	Supermarket	Seafood Restaurant	Italian Restaurant	Winery	Market
68	Bahamas	Beach	Resort	Hotel	Coffee Shop	Ice Cream Shop	Italian Restaurant	Mobile Phone Shop	Plaza	Restaurant	Caribbean Restaurant
71	British Virgin Islands	Beach	American Restaurant	Bar	Caribbean Restaurant	Hotel	Resort	Grocery Store	Pizza Place	Mexican Restaurant	Hardware Store
77	Cayman Islands	Caribbean Restaurant	Hotel	Resort	Italian Restaurant	Beach	Restaurant	Other Great Outdoors	Seafood Restaurant	Café	Mediterranean Restaurant
78	Guernsey	Beach	Hotel	Restaurant	French Restaurant	Café	Seafood Restaurant	Historic Site	Scenic Lookout	Creperie	Pub
85	Barbados	Caribbean Restaurant	Beach	Hotel	Café	Shopping Mall	Resort	Bar	Fast Food Restaurant	History Museum	Sandwich Place
118	Aden	Hotel	Surf Spot	Resort	Airport	Airport Food Court	Hotel Bar	Beach	Zoo	Fondue Restaurant	Flower Shop
141	Basseterre	Caribbean Restaurant	Beach	Hotel	French Restaurant	Resort	Bar	Seafood Restaurant	Beach Bar	Cocktail Bar	Restaurant
145	Belmopan	Hotel	Resort	Caribbean Restaurant	Restaurant	Historic Site	Beach	Coffee Shop	Latin American Restaurant	BBQ Joint	Park
151	Cape Town	Beach	Hotel	Coffee Shop	Café	Trail	Supermarket	Seafood Restaurant	Italian Restaurant	Winery	Market
154	Brades Estate	Beach	Caribbean Restaurant	Fast Food Restaurant	Café	Hotel	Resort	Pizza Place	Gym	Plaza	Ice Cream Shop
155	Plymouth	Beach	Pub	Café	Seafood Restaurant	Hotel	Historic Site	Restaurant	Surf Spot	Bar	Park
159	Bridgetown	Caribbean Restaurant	Beach	Hotel	Café	Shopping Mall	Resort	Bar	Fast Food Restaurant	History Museum	Sandwich Place
167	Castries	Beach	Resort	Caribbean Restaurant	Bakery	Hotel	French Restaurant	Ice Cream Shop	Pizza Place	Distillery	Bar
170	Charlotte Amalie	Beach	Resort	Caribbean Restaurant	Bar	American Restaurant	Restaurant	Pharmacy	Café	Pizza Place	Island
172	Cockburn Town	Caribbean Restaurant	Beach	Resort	BBQ Joint	Bar	Lighthouse	Coffee Shop	Hotel	Juice Bar	Airport
191	Tifariti	Park	Fishing Spot	Beach	Clothing Store	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fish Market
193	Freetown	Beach	Restaurant	Hotel	Lebanese Restaurant	Middle Eastern Restaurant	Mediterranean Restaurant	Coffee Shop	Ice Cream Shop	Bakery	Resort
203	Gustavia	Caribbean Restaurant	Hotel	Beach	French Restaurant	Resort	Bar	Seafood Restaurant	Steakhouse	Airport	Beach Bar
204	Hagåtña	Beach	Resort	Department Store	American Restaurant	Hotel	Dessert Shop	Restaurant	Pizza Place	Fast Food Restaurant	Burger Joint
225	Kingston	Caribbean Restaurant	Hotel	Beach	Resort	Coffee Shop	Department Store	Café	Tea Room	Botanical Garden	Sushi Restaurant

256	Marigot	French Restaurant	Hotel	Beach	Caribbean Restaurant	Bar	Seafood Restaurant	Resort	Cocktail Bar	Airport	Beach Bar
267	Muscat	Beach	Coffee Shop	Hotel	Café	Mountain	Burger Joint	History Museum	Shopping Mall	Juice Bar	Steakhouse
269	Nassau	Beach	Resort	Hotel	Coffee Shop	Caribbean Restaurant	Italian Restaurant	Airport	Restaurant	Mobile Phone Shop	Plaza
281	Oranjestad	Beach	Resort	Caribbean Restaurant	Seafood Restaurant	Hotel	Restaurant	Fast Food Restaurant	Burger Joint	Shopping Mall	Italian Restaurant
285	Pago Pago	Beach	Fast Food Restaurant	Resort	Bar	Café	National Park	Bed & Breakfast	Zoo	Food & Drink Shop	Food
291	Philipsburg	Caribbean Restaurant	Beach	French Restaurant	Hotel	Seafood Restaurant	Bar	Resort	Airport	Beach Bar	Cocktail Bar
293	Port Louis	Resort	Beach	Hotel	Café	Park	Surf Spot	Chinese Restaurant	Shopping Mall	Indian Restaurant	Golf Course
307	Road Town	Beach	Caribbean Restaurant	Bar	Resort	American Restaurant	BBQ Joint	Hotel	Mexican Restaurant	Beach Bar	Grocery Store
310	Saipan	Beach	Park	Ice Cream Shop	State / Provincial Park	Sandwich Place	Hotel	Grocery Store	Coffee Shop	Breakfast Spot	Trail
316	Valparaíso	Beach	Vineyard	Resort	Scenic Lookout	Restaurant	Bakery	Coffee Shop	Pizza Place	Italian Restaurant	Beer Garden
326	St. Helier	Beach	Hotel	Restaurant	Historic Site	French Restaurant	Scenic Lookout	History Museum	Creperie	Surf Spot	Seafood Restaurant
328	St. Peter Port	Beach	Hotel	Restaurant	French Restaurant	Café	Seafood Restaurant	History Museum	Scenic Lookout	Creperie	Pub
361	Willemstad	Resort	Beach	Hotel	Bar	Café	Supermarket	Beach Bar	Caribbean Restaurant	Frozen Yogurt Shop	BBQ Joint

Cluster 9

	City	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
224	King Edward Point	Observatory	Movie Theater	Zoo	Fishing Spot	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fish Market

Cluster 10

	City	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
32	Abu Dhabi	Hotel	Resort	Beach	Shopping Mall	Food Truck	Movie Theater	Mosque	Art Museum	Sandwich Place	Electronics Store
94	Sofia	Hotel	Restaurant	Rest Area	Boarding House	Zoo	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot
130	Asmara	Hotel	Airport	Campground	Vineyard	Cosmetics Shop	Electronics Store	Lounge	Restaurant	Field	Filipino Restaurant
136	Bamako	Hotel	Bar	Thai Restaurant	Park	Grocery Store	Greek Restaurant	Café	Pizza Place	Sports Club	Nightclub
139	Bangui	Hotel	Coffee Shop	Convenience Store	Airport	Zoo	Fish Market	Food	Fondue Restaurant	Flower Shop	Flea Market
149	Bissau	Hotel	Portuguese Restaurant	Port	Bakery	African Restaurant	Airport	Pizza Place	Hotel Bar	Plaza	Fish & Chips Shop
175	Conakry	Hotel	Restaurant	Pier	Turkish Restaurant	Electronics Store	Shopping Mall	Nightclub	French Restaurant	Pedestrian Plaza	African Restaurant
218	Juba	Hotel	Restaurant	Café	Grocery Store	Resort	African Restaurant	Food	Fondue Restaurant	Flower Shop	Flea Market
249	Malabo	Hotel	Hotel Bar	Restaurant	Resort	Café	Motel	French Restaurant	Zoo	Fish Market	Flower Shop
265	Moroni	Hotel	Resort	Airport	Zoo	Adult Boutique	Farm	Farmers Market	Falafel Restaurant	Fast Food Restaurant	Field
271	N'Djamena	Hotel	Resort	French Restaurant	Outdoor Sculpture	Restaurant	African Restaurant	Airport	Hotel Pool	Fish & Chips Shop	Flower Shop
301	Pyongyang	Hotel	Plaza	Stadium	Airport	Noodle House	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot	Fish Market
318	São Tomé	Hotel	Resort	African Restaurant	Airport	BBQ Joint	Café	Art Gallery	Plaza	Zoo	Fishing Spot
341	Thimphu	Hotel	Café	Resort	Restaurant	Historic Site	Monument / Landmark	Mountain	Asian Restaurant	Pub	Trail

Cluster 11

	City	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
192	Flying Fish Cove	National Park	Airport	Diner	Zoo	Flea Market	Food Court	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop
194	Funafuti	Bed & Breakfast	Airport	Zoo	Fishing Spot	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fish Market
248	Majuro	Grocery Store	Convenience Store	Airport	Hotel	Zoo	Fish Market	Food	Fondue Restaurant	Flower Shop	Flea Market
258	Mata Utu	Restaurant	Airport	Zoo	Fish Market	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot
330	Stanley	Airport	Grocery Store	Port	Hotel	Diner	Zoo	Fish Market	Fondue Restaurant	Flower Shop	Flea Market

Cluster 12

	City	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
25	Montreal	Café	Park	Bakery	Restaurant	Grocery Store	Coffee Shop	French Restaurant	Bagel Shop	Japanese Restaurant	Spa
43	Wellington	Café	Coffee Shop	Restaurant	Brewery	Bar	Gym	Beach	Indie Movie Theater	Park	Burger Joint
102	Kuwait City	Coffee Shop	Café	Shopping Mall	Frozen Yogurt Shop	Burger Joint	Juice Bar	Japanese Restaurant	Ice Cream Shop	Gym / Fitness Center	Breakfast Spot
121	Alofi	Café	Resort	Indian Restaurant	Warehouse Store	Airport	Hostel	Restaurant	Japanese Restaurant	Farm	Fish Market
122	Amman	Café	Coffee Shop	Middle Eastern Restaurant	Dessert Shop	Ice Cream Shop	Bakery	Italian Restaurant	Burger Joint	Historic Site	Falafel Restaurant
133	Avarua	Café	Resort	Restaurant	Airport	Sandwich Place	Seafood Restaurant	Harbor / Marina	Hostel	Miscellaneous Shop	Fast Food Restaurant
211	Honiara	Café	Airport	Australian Restaurant	Shopping Mall	Zoo	Fish Market	Food	Fondue Restaurant	Flower Shop	Flea Market
220	Kampala	Café	Hotel	Coffee Shop	African Restaurant	Resort	Shopping Mall	Fast Food Restaurant	Restaurant	Indian Restaurant	Beer Garden
255	Mariehamn	Café	Hotel	Restaurant	Beach	Scandinavian Restaurant	Grocery Store	Harbor / Marina	Bar	Burger Joint	Seafood Restaurant
344	Tórshavn	Café	Hotel	Scandinavian Restaurant	Lighthouse	Steakhouse	Coffee Shop	Tourist Information Center	Hotel Bar	Hostel	Duty-free Shop
345	Tripoli	Café	Italian Restaurant	Diner	Clothing Store	Ice Cream Shop	Seafood Restaurant	Plaza	Pizza Place	Bakery	Gym
353	Victoria	Café	Pub	Bakery	Grocery Store	Supermarket	Australian Restaurant	Theater	Thai Restaurant	Movie Theater	Restaurant

Cluster 13

	City	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
261	Mogadishu	Automotive Shop	Hotel	Restaurant	Beach	Fish Market	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot

Cluster 14

	City	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
116	Adamstown	Nature Preserve	Zoo	Food Stand	Food Court	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Fishing Spot

Cluster 15

	City	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	
11	Luxembourg	Hotel	French Restaurant	Bar	Park	Italian Restaurant	Restaurant	Café	Sculpture Garden	Trail	
12	Edinburgh	Café	Hotel	Park	Coffee Shop	Pub	Beer Bar	Bar	Cocktail Bar	Scenic Lookout	
18	Washington, D.C.	American Restaurant	Fast Food Restaurant	Pizza Place	Brewery	Bakery	Park	Ice Cream Shop	State / Provincial Park	Trail	
38	Osaka	Theme Park Ride / Attraction	Ramen Restaurant	Coffee Shop	Hotel	Park	Sake Bar	Bar	Dessert Shop	Japanese Curry Restaurant	
49	Oslo	Bar	Coffee Shop	Bakery	Park	Cocktail Bar	Movie Theater	Pizza Place	Burger Joint	Brewery	
70	Cyprus	Café	Restaurant	Coffee Shop	Hotel	Bar	Seafood Restaurant	Gym / Fitness Center	Historic Site	Greek Restaurant	
72	Malta	Bay	Mediterranean Restaurant	Bar	Historic Site	Hotel	Beach	Café	Italian Restaurant	Garden	
75	Vilnius	Coffee Shop	Café	Hotel	Scenic Lookout	Bar	Gym	Park	Plaza	Gym / Fitness Center	
76	Isle of Man	Pub	Park	Restaurant	Coffee Shop	Bar	Café	History Museum	Beach	Ice Cream Shop	
81	GIFT City-Gujarat	Indian Restaurant	Multiplex	Café	Fast Food Restaurant	Dessert Shop	Restaurant	Pizza Place	Sandwich Place	Coffee Shop	
87	Tallinn	Beach	Café	Scenic Lookout	Restaurant	Hotel	Pizza Place	Park	Trail	Wine Bar	
91	Athens	Café	Coffee Shop	Historic Site	Bar	Park	Meze Restaurant	Hotel	History Museum	Souvlaki Shop	

99	Reykjavik	Café	Seafood Restaurant	Bar	Restaurant	Hotel	Scandinavian Restaurant	Coffee Shop	Pool	Burger Joint
125	Andorra la Vella	Ski Area	Hotel	Restaurant	Spanish Restaurant	Mountain	Mediterranean Restaurant	Gastropub	Diner	BBQ Joint
129	Ashgabat	Restaurant	Café	Nightclub	Shopping Mall	Hotel	Coffee Shop	Italian Restaurant	Steakhouse	Stadium
137	Bandar Seri Begawan	Café	Asian Restaurant	Fast Food Restaurant	Coffee Shop	Department Store	Chinese Restaurant	Bakery	Indian Restaurant	Hotel
143	Beirut	Mountain	Coffee Shop	Restaurant	Resort	Dessert Shop	Bakery	Hotel	Sushi Restaurant	Middle Eastern Restaurant
144	Belgrade	Restaurant	Hotel	Pizza Place	Park	Ice Cream Shop	Gym / Fitness Center	Bistro	Cocktail Bar	Dessert Shop
150	Bloemfontein	Hotel	Coffee Shop	Burger Joint	Breakfast Spot	Bar	Fast Food Restaurant	Restaurant	History Museum	Art Gallery
164	Cairo	Café	Hotel	Sushi Restaurant	Supermarket	Sports Club	Historic Site	Hotel Bar	Middle Eastern Restaurant	Shopping Mall
165	Canberra	Café	Coffee Shop	Burger Joint	Park	Pub	History Museum	Gastropub	Farmers Market	Market
180	Damascus	Restaurant	Café	Mountain	Coffee Shop	Resort	Hotel	Shopping Mall	Dessert Shop	French Restaurant
183	Dhaka	Café	Coffee Shop	Indian Restaurant	Train Station	Pizza Place	Electronics Store	Nightclub	Resort	Shopping Mall
185	Djibouti	Hotel	Restaurant	Seafood Restaurant	Grocery Store	Pub	Coffee Shop	Café	Nightclub	Pizza Place
207	Harare	Café	Shopping Mall	Bar	Golf Course	Pizza Place	Restaurant	Cocktail Bar	Hotel	Farmers Market
212	Islamabad	Bakery	Pakistani Restaurant	Hotel	Market	Café	BBQ Joint	Sandwich Place	Asian Restaurant	Scenic Lookout
221	Kathmandu	Resort	Restaurant	Café	Hotel	Asian Restaurant	Coffee Shop	Historic Site	Plaza	Spanish Restaurant

222	Khartoum	Café	Pizza Place	BBQ Joint	Juice Bar	Burger Joint	Coffee Shop	Middle Eastern Restaurant	Electronics Store	Lounge
233	La Paz	Café	Coffee Shop	Hotel	Bar	Mexican Restaurant	Japanese Restaurant	South American Restaurant	Vegetarian / Vegan Restaurant	Comfort Food Restaurant
239	Ljubljana	Restaurant	Trail	Pizza Place	Scenic Lookout	Eastern European Restaurant	Castle	Coffee Shop	Café	Ice Cream Shop
250	Malé	Bakery	Airport	Convenience Store	Art Gallery	Bar	Chocolate Shop	Farm	Farmers Market	Fast Food Restaurant
251	Managua	Café	Steakhouse	Italian Restaurant	Restaurant	Pizza Place	Coffee Shop	Breakfast Spot	Park	Ice Cream Shop
254	Maputo	Café	Hotel	Italian Restaurant	Resort	Pizza Place	Seafood Restaurant	Beach	Park	Portuguese Restaurant
260	Minsk	Coffee Shop	Gym	Park	Spa	Gym / Fitness Center	Cocktail Bar	Bar	Multiplex	Wine Bar
273	Ngerulmud	American Restaurant	Resort	Japanese Restaurant	Asian Restaurant	Restaurant	Harbor / Marina	Coffee Shop	Hotel	Park
275	Nicosia	Café	Restaurant	Bar	Coffee Shop	Hotel	Historic Site	Gym / Fitness Center	Seafood Restaurant	Greek Restaurant
289	Paramaribo	Fast Food Restaurant	Casino	Resort	Hotel	Café	Nightclub	Burger Joint	Fried Chicken Joint	Bar
300	Pristina	Café	Restaurant	Bar	Hotel	Bakery	Steakhouse	Gym / Fitness Center	Pizza Place	Coffee Shop
304	Reykjavik	Café	Seafood Restaurant	Bar	Restaurant	Hotel	Scandinavian Restaurant	Coffee Shop	Pool	Burger Joint
309	Roseau	Sandwich Place	Ice Cream Shop	Fast Food Restaurant	Bar	Inn	Coffee Shop	Electronics Store	American Restaurant	Casino

319	Sarajevo	Café	Restaurant	European Restaurant	Hotel	Mountain	Coffee Shop	Park	Bar	Bakery
322	Skopje	Café	Bar	Restaurant	Gym / Fitness Center	Hotel	Bakery	Burger Joint	Italian Restaurant	Dessert Shop
327	St. John's	Restaurant	Pub	Fast Food Restaurant	Brewery	Seafood Restaurant	Bakery	Coffee Shop	Pharmacy	Gastropub
329	St. Pierre	French Restaurant	Theme Park Ride / Attraction	Bar	Plaza	Restaurant	Café	Hotel	Park	Wine Bar
333	Sukhumi	Café	Mountain	Hotel	Ski Area	Beach	Ski Chairlift	Restaurant	Park	Resort
334	Suva	Shopping Mall	Café	Chinese Restaurant	Hotel	Farmers Market	Convenience Store	Coffee Shop	Bar	Flea Market
337	Tashkent	Coffee Shop	Restaurant	Café	Hotel	Park	Steakhouse	Plaza	Burger Joint	Comfort Food Restaurant
338	Tbilisi	Hotel	Bakery	Restaurant	Café	Wine Bar	Caucasian Restaurant	Park	Ice Cream Shop	Coffee Shop
339	Tegucigalpa	Hotel	Café	Seafood Restaurant	Coffee Shop	Steakhouse	Park	Latin American Restaurant	Restaurant	Department Store
342	Tirana	Café	Hotel	Seafood Restaurant	Restaurant	Italian Restaurant	Cocktail Bar	Beach	Bistro	Lounge
350	Valletta	Bay	Bar	Historic Site	Mediterranean Restaurant	Italian Restaurant	Hotel	Beach	Café	Garden
351	The Valley	American Restaurant	Coffee Shop	Mexican Restaurant	Fast Food Restaurant	Steakhouse	Sandwich Place	Brewery	Restaurant	Museum
355	Vientiane	Coffee Shop	Thai Restaurant	Café	Hotel	Bakery	Som Tum Restaurant	Asian Restaurant	Vietnamese Restaurant	Scenic Lookout
365	Yerevan	Restaurant	Café	Park	Hookah Bar	Food Court	Hotel	Plaza	Supermarket	Monument / Landmark
366	Zagreb	Restaurant	Café	Bar	BBQ Joint	Hotel	Plaza	Bistro	Pizza Place	Dessert Shop

Cluster 16

	City	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
360	West Island	Bar	Buffet	Airport	Zoo	Fishing Spot	Food Court	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop

Cluster 17

	City	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
156	Brasilia	Athletics & Sports	Art Gallery	National Park	Fishing Spot	Food & Drink Shop	Food	Fondue Restaurant	Flower Shop	Flea Market	Zoo

Cluster 18

	City	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
200	Gitega	Restaurant	Pizza Place	Hotel	Diner	Resort	Ice Cream Shop	African Restaurant	Bistro	Beach	Border Crossing
201	Bujumbura	Restaurant	Pizza Place	Hotel	Diner	African Restaurant	Bistro	Beach	Zoo	Fondue Restaurant	Flower Shop

Cluster 19

	City	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
3	Tokyo	Hotel	BBQ Joint	Coffee Shop	Art Museum	Japanese Restaurant	Garden	Udon Restaurant	Soba Restaurant	History Museum	Chinese Restaurant
10	Los Angeles	Ice Cream Shop	Hotel	Trail	Park	Farmers Market	Italian Restaurant	Theme Park	Theater	Coffee Shop	Grocery Store
13	Geneva	Hotel	French Restaurant	Park	Coffee Shop	Italian Restaurant	Bar	Plaza	Farmers Market	Dessert Shop	Beach
17	Paris	Plaza	Hotel	Art Museum	French Restaurant	Wine Bar	Bookstore	Ice Cream Shop	Park	Garden	Seafood Restaurant
19	Chicago	Hotel	Park	Trail	Coffee Shop	Waterfront	Yoga Studio	Liquor Store	Pizza Place	Ice Cream Shop	Diner
27	Madrid	Plaza	Restaurant	Spanish Restaurant	Park	Tapas Restaurant	Art Museum	Coffee Shop	Monument / Landmark	Gourmet Shop	Gym / Fitness Center
37	Milan	Hotel	Plaza	Pizza Place	Park	Ice Cream Shop	Italian Restaurant	Monument / Landmark	Cocktail Bar	Bakery	Museum
52	Rome	Plaza	Ice Cream Shop	Historic Site	Monument / Landmark	Hotel	Church	Fountain	Park	Sandwich Place	Museum
53	Vienna	Park	Austrian Restaurant	Plaza	Hotel	Palace	Japanese Restaurant	Pizza Place	Gastropub	Art Museum	Ice Cream Shop
58	Lisbon	Plaza	Portuguese Restaurant	Scenic Lookout	Park	Hotel	Garden	Café	Ice Cream Shop	Tapas Restaurant	Bakery
63	Istanbul	Mosque	Hotel	Historic Site	Park	Café	Concert Hall	Coffee Shop	Soccer Stadium	History Museum	Theater
69	Mexico City	Ice Cream Shop	Bakery	Mexican Restaurant	Park	Hotel	Museum	Art Museum	Taco Place	Seafood Restaurant	Coffee Shop
79	São Paulo	Ice Cream Shop	Pizza Place	Bookstore	Theater	Brazilian Restaurant	Bar	Gym / Fitness Center	Restaurant	Burger Joint	Hotel
84	Rio de Janeiro	Scenic Lookout	Beach	Park	Ice Cream Shop	Bakery	Mountain	Bookstore	Coffee Shop	Pedestrian Plaza	Waterfront
93	Buenos Aires	Hotel	Ice Cream Shop	Bakery	Italian Restaurant	Pizza Place	Park	Coffee Shop	Plaza	Argentinian Restaurant	Wine Shop
100	Budapest	Coffee Shop	Hotel	Bakery	Vietnamese Restaurant	Park	Dessert Shop	Theater	Pizza Place	Gourmet Shop	Historic Site
103	Saint Petersburg	Hotel	Park	Coffee Shop	Theater	Art Museum	Historic Site	Plaza	Italian Restaurant	Scenic Lookout	Spa
147	Bern	Hotel	Park	Mountain	Plaza	Bar	Café	Art Museum	Swiss Restaurant	Waterfall	Scenic Lookout
209	Havana	Cuban Restaurant	Hotel	Beach	Plaza	Restaurant	Cocktail Bar	Café	Historic Site	Park	Coffee Shop
264	Montevideo	Scenic Lookout	Plaza	Park	Waterfront	Hotel	BBQ Joint	Coffee Shop	Supermarket	Beach	Ice Cream Shop
302	Quito	Hotel	Ice Cream Shop	Park	Bakery	Resort	Shopping Mall	Coffee Shop	BBQ Joint	Peruvian Restaurant	Scenic Lookout
313	San Marino	Italian Restaurant	Ice Cream Shop	Plaza	Beach	Seafood Restaurant	Historic Site	Castle	Piadineria	Pizza Place	Hotel
325	St. George's	Plaza	French Restaurant	Bar	Theme Park Ride / Attraction	Park	Hotel	Bakery	Alsatian Restaurant	Historic Site	History Museum
349	Vaduz	Hotel	Ski Area	Trail	Coffee Shop	Swiss Restaurant	Park	Mountain	German Restaurant	Zoo Exhibit	Cocktail Bar
352	Vatican City	Plaza	Ice Cream Shop	Historic Site	Hotel	Church	Monument / Landmark	Park	Fountain	Museum	Wine Bar

The results show that cities can be grouped together by looking at their venues. At first glance, we can see that very large cities or cities from countries with similar cultural backgrounds seem to have a tendency to group together.

Some groups have really defined similarities. Some other clusters seem to represent outliers that didn't fit in any clusters. Many of these clusters are smaller cities that did not have many venues. One interesting cluster is number 7 consisting of Algiers, the capital of Algeria. With a population of around four million, it's a large city that didn't fit in with other groups of large cities.

The results show that valuable information can be gathered from looking at their clusters. Large groups of similar cities or distinct cities like Algiers.

By analyzing the clusters, we can find useful information about cities that might be similar in experience. For example, cluster 4 have a group of cities where parks are the most common venue and cluster 12 has cities with a lot of cafés. Cluster 8 consists of a group of cities where beaches are the most common.

5. Discussion

At first, the outlier clusters seemed like weakness in the dataset representing cities that could be excluded in the cleaning process. This could still be done with more time and even better clusters could be achieved in the process. In contrast, the Algiers example shows that outliers can give valuable insights if they represent cities with particular venues.

Also, some cities have coordinates the put them in wrong places. Further work would be needed to correct these. For now, looking at both the map and the cluster details is sufficient to work around this problem.

6. Conclusion

The question we wanted to answer were the following. How is one city similar to the others? What are the most common venues that set these cities apart?

In the results section, we set forward that the current city clustering analysis was able to answer these questions.

If you are a seasoned globetrotter, by looking at the data, you might decide you want to explore the idea of a trip to Tel Aviv if you like beaches. Maybe you wouldn't have thought of going to a city that large and expect to find this kind of venue.

If on the other hand, you are a traveling business man, you might plan your meetings better by knowing that Singapore, where you have never been, is similar to London that you know very well.