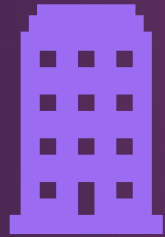


What business to set-up in which part of the world ?

DON'T WORRY WE WILL TELL YOU 😊

Problem



You own a big multi-national company



You want to set-up in foreign markets



But you don't know the cultural differences and the local customs

Inputs

- ▶ You need to come with a list to city you consider investing in
- ▶ For this study, we compared various cities mainly in Europe but also in the Middle-East
- ▶ 'Bayonne', 'Biarritz', 'Anglet', 'Bordeaux', 'Istanbul',
- ▶ 'London', 'Ankara', 'Bilbao', 'Barcelone', 'Birmingham',
- ▶ 'Dublin', 'Abu Dhabi', 'Dubai', 'Roma', 'Milan',
- ▶ 'Berlin', 'Zagreb', 'Budapest'

Data

- ▶ We will be using the Foursquare API:
- ▶ <https://api.foursquare.com/v2/venues/explore?>
- ▶ It returns all the venues by city

Neighborhood	Latitude	Longitude	Venue	Venue Category
Bayonne	43.493338	-1.475099	Chocolat Cazenave	Tea Room
Bayonne	43.493338	-1.475099	Place Charles de Gaulle	Plaza
Bayonne	43.493338	-1.475099	Le Chistera	Southwestern French Restaurant
Bayonne	43.493338	-1.475099	À La Bolée	Creperie
Bayonne	43.493338	-1.475099	Katie Daly's	Pub
...
Budapest	47.481390	19.146073	Csősztorony Bisztró	Bistro
Budapest	47.481390	19.146073	Óhegy park futókör	Track
Budapest	47.481390	19.146073	Barátság park	Park
Budapest	47.481390	19.146073	Csősztorony (185, 85)	Bus Stop
Budapest	47.481390	19.146073	CBA Prima	Grocery Store

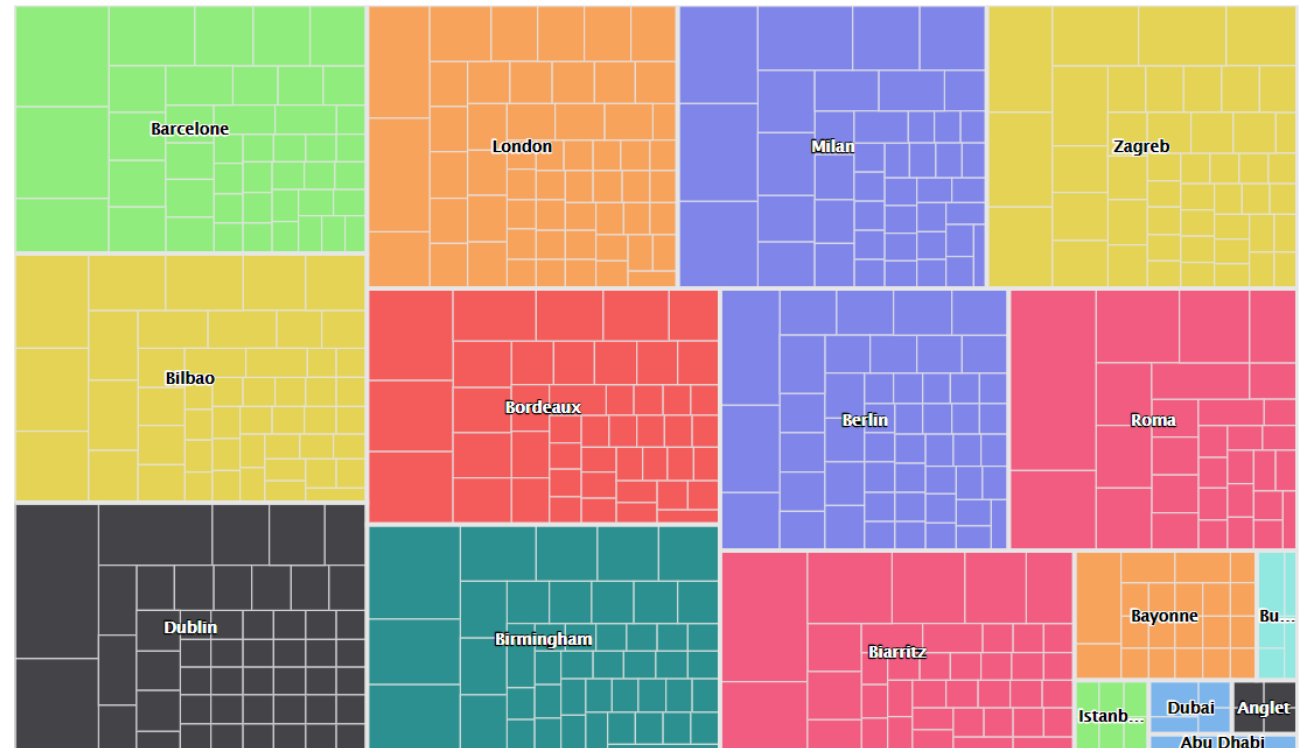
columns

Data exploratory

- ▶ Get the number of venues by city
- ▶ Get the most common venues
- ▶ Group the venues
- ▶ Be able to drilldown and zoom

Venues per city and category

Click points to drill down



Data transformation and ML model

- ▶ One hot-encoding
- ▶ K-mean with 10 clusters based on the most common venues per city

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue
0	Abu Dhabi	Convenience Store	Cricket Ground	Shopping Mall	Electronics Store	Food	Flea Market
1	Anglet	Pharmacy	Shopping Mall	Gym	Cafeteria	Wine Shop	Electronics Store
2	Barcelone	Tapas Restaurant	Plaza	Bar	Cocktail Bar	Wine Bar	Hotel
3	Bayonne	French Restaurant	Hotel	Restaurant	Tapas Restaurant	Historic Site	Tea Room
4	Berlin	Hotel	German Restaurant	Coffee Shop	Café	Italian Restaurant	Clothing Store
5	Biarritz	French Restaurant	Tapas Restaurant	Hotel	Bar	Nightclub	Café

Choice of the k-mean



lets you decide
the number of
cluster,



relatively simple
to understand,



scales to large
data sets,



guarantees
convergence,



can warm-start
the positions of
centroids,



easily adapts to
new examples,



generalizes to
clusters of
different shapes
and sizes, such as
elliptical clusters.

Results

- ▶ When plotting the results on the map, we found out that the clusters were grouped according to their geography.
- ▶ This is amazing because it emphasizes the cultural difference.
- ▶ Mediterranean countries such as Spain, France, Italy have a great number of restaurants but Rome is specific with a lot of historic sites.
- ▶ Arabic countries have a lot of convenience stores and fat food (fast-food, yoghurt shops etc).
- ▶ Northern countries have pubs, bars and live-music.
- ▶ Capitals have more hotels and smaller town are more healthy with many gyms and pharmacies.

