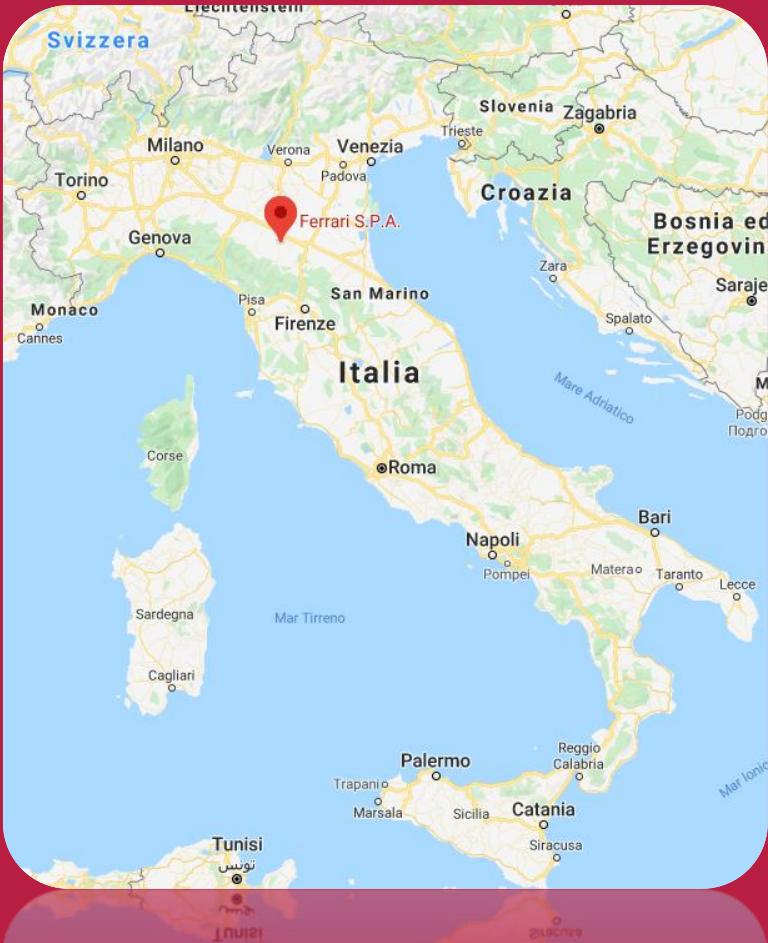


LIVING IN THE MOTORVALLEY

Which is the best place to live for those who start
working in Ferrari?

Final project of the Coursera Applied Data Science Capstone course
By Sebastian D'Amico

WHY?



Ferrari headquarter is in Maranello, a small town at about 18 km from Modena, with a population of 17,504 (as of 2017). It is known worldwide as the home of Ferrari and Scuderia Ferrari Formula One racing team. Several other towns surround Maranello, and Modena, with 184.000-ish inhabitants, is the closest and biggest town with Shopping Centers, University, nightlife and many other services that push most of the people, joining Ferrari, to look for a house. Obviously is difficult to find all the services that are present in Modena in any other small town that surround Maranello, but which are the main differences between all the towns? The aim of this project is to classify the Maranello and surrounding towns in terms of available services and venues to help people joining Ferrari to judge, with real data, which is the place that better suits their own requirements.

THE DATA



Data gathered from different web sources

- Modena Neighborhood details:

<https://www.comune.modena.it/decentralamento/il-decentralamento-a-modena/la-frazioni-centri-di-periferia>

- Towns in the province of Modena:

<https://zip-codes.nonsolocap.it/emilia-romagna/91-cap-province-of-modena/>

- Coordinates for each town:

<https://www.coordinate-gps.it/>

- Driving distance between locations:

https://www.mapdevelopers.com/distance_from_to.php

Foursquare API used to gather all the venues in each location:

- FOURSQUARE API

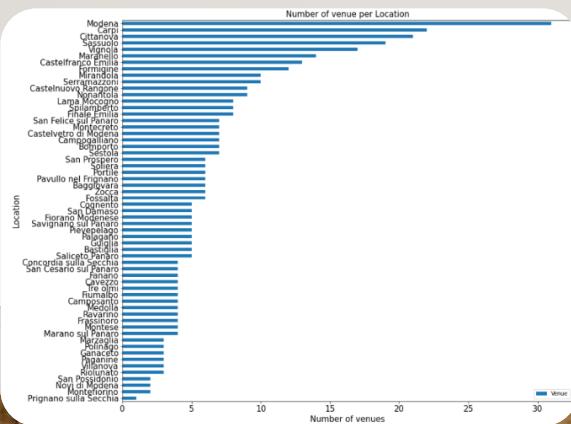
<https://developer.foursquare.com/docs>

THE METHOD

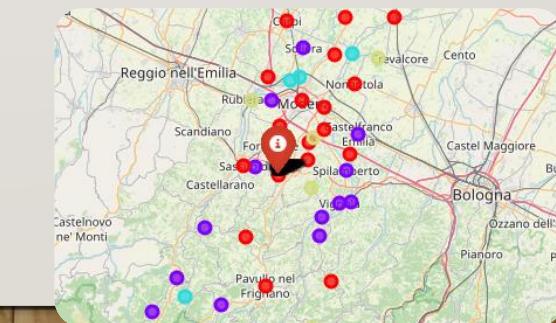


Data Collection

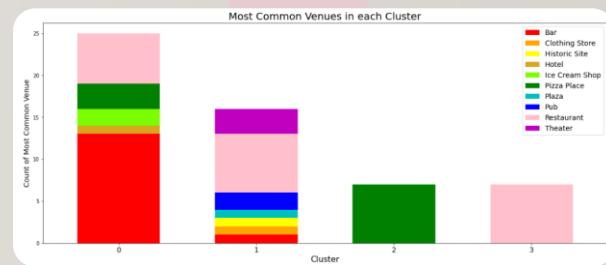
	Location	Latitude	Longitude	DistanceToMaranello
0	Modena	44.650177	10.921732	22.96
1	Marzaglia	44.650963	10.803609	20.87
2	Cittanova	44.650268	10.850284	21.80
3	Cognento	44.636302	10.871811	16.96
4	Baggiovara	44.607764	10.867751	11.27



Data Overview



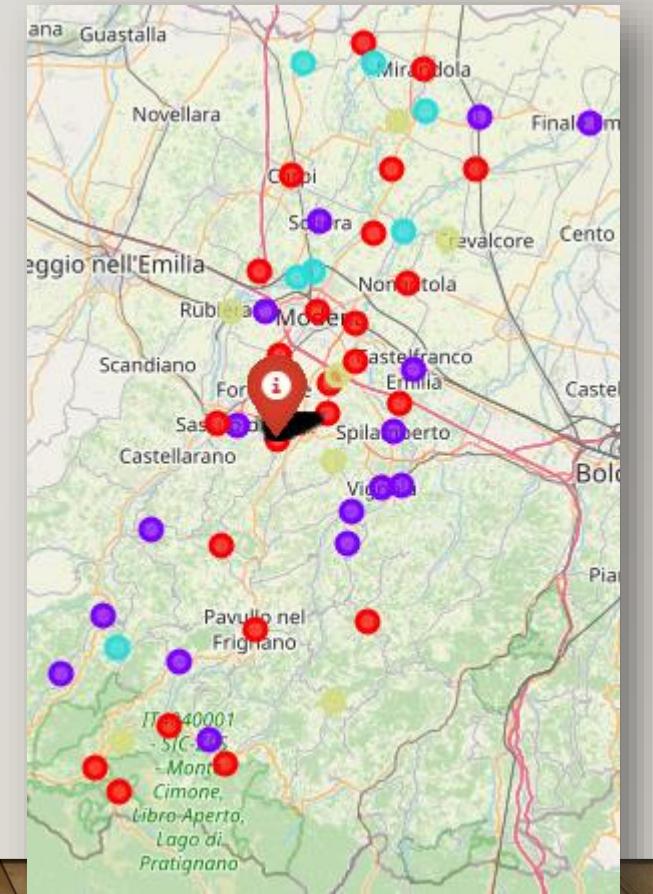
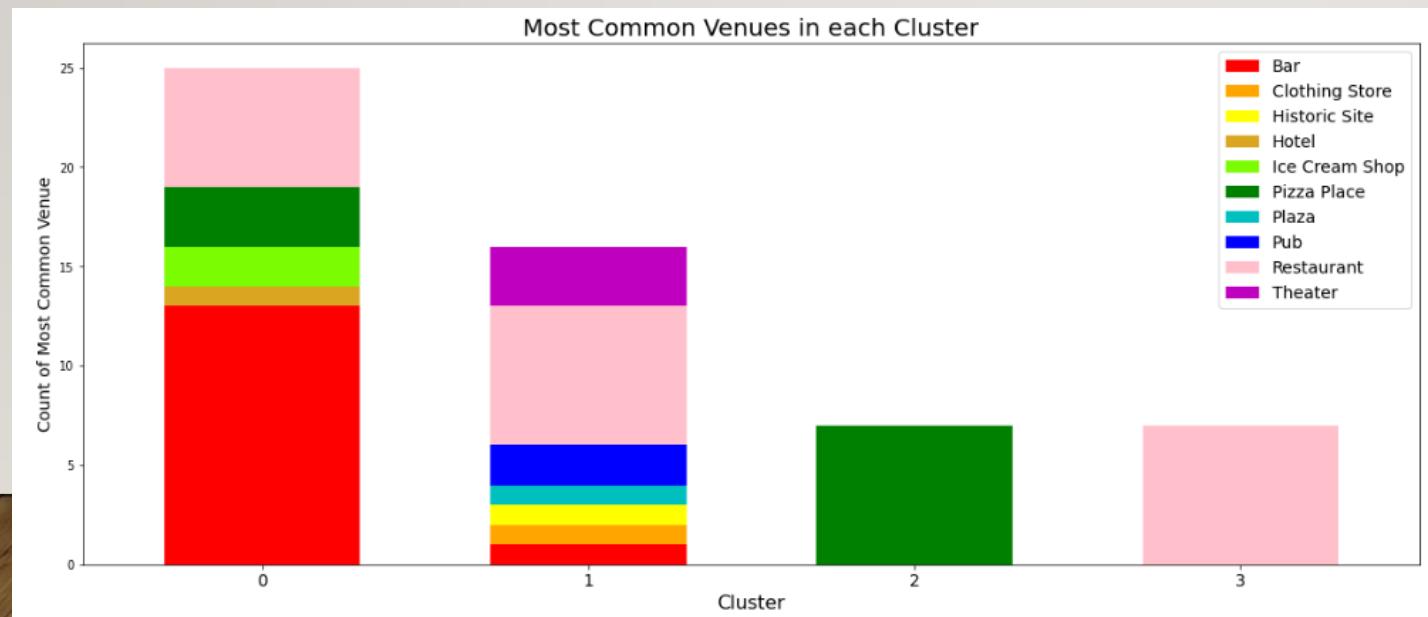
Data Clustering



RESULTS



- 4 different clusters based on venues category:
 - **Cluster 0:** several Bars and Restaurant/Pizza with Ice Cream shops and few Hotels;
 - **Cluster 1:** several Restaurants but also social areas like theaters, pubs, Historic sites and clothing stores;
 - **Cluster 2:** mainly pizza places;
 - **Cluster 3:** mainly restaurants.



CONCLUSIONS



People joining Ferrari have a lot of places where to find a house. Different services and different venues are available but the most common category here is "food". On top of that, based on the distance from the office, one can choose to stay in areas with more green and less population density or places like Modena with more people. Overall, the final decision to find an optimal location for a new resident will be made by the individuals themselves. As well as finding about how the different locations are characterized by the number of venues, they should also consider other factors such as transport, housing prices and access to different necessities.



THANKS FOR READING!