



FINDING THE MOST SUITABLE
BOOKING PLACE IN
CASCAIS NEAR ITALIAN
RESTAURANTS

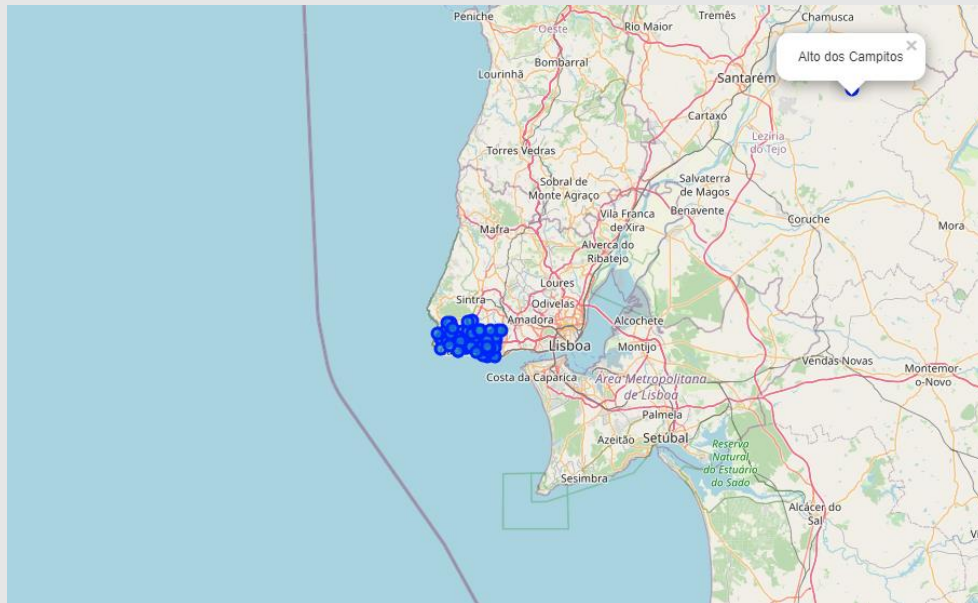
MOST SUITABLE BOOKING PLACE TO BE NEAR ITALIAN RESTAURANTS

- A couple from France is visiting Cascais and they really enjoy italian food, therefore they want to find the most suitable booking place to be near italian restaurants.
- This couple belongs to a climate activist group and they ride their own bicycles everywhere.
- They want to find the booking place that, in theory, will require the least amount of travelling time to the italian restaurants.

DATA PREPARATION

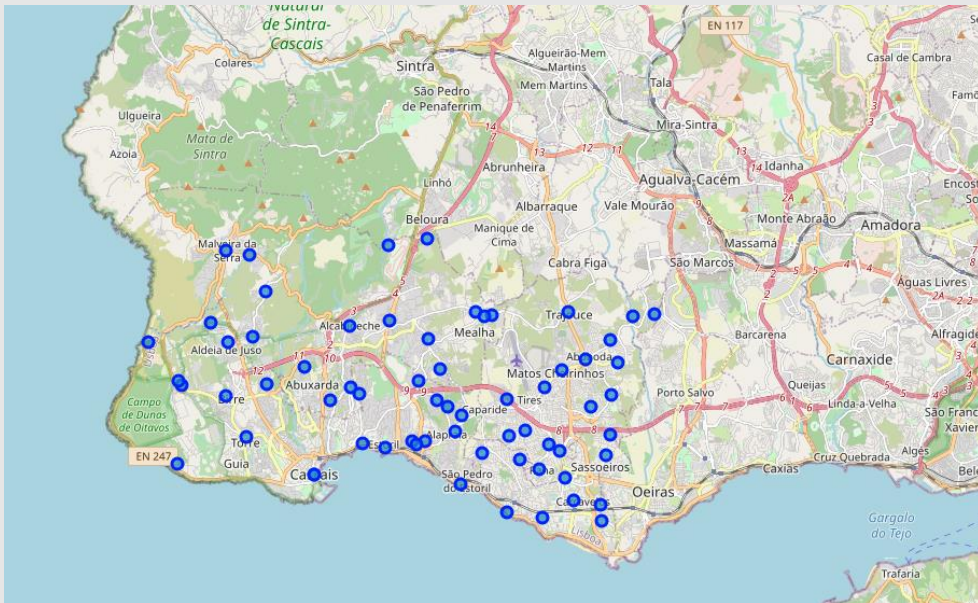
- [Github/cusco](#) shares a .csv dataset with all the regions and postal codes from Portugal, originally found on CTT - Correios de Portugal API, the portuguese official post office, and will be used to scrap the regions of Cascais.
- Italian restaurants and booking places are retrieved from [Foursquare API](#).
- Cascais neighborhoods, called *Localidades*, have 66 entries. Their coordinates were retrieved using Geocoder.
- There are 19 Italian Restaurants, Pizza Places were also considered.
- There are 24 Booking Places, considering Hotels, Hostels and Resorts.

NEIGHBOURHOODS DISTRIBUTION



- By analyzing the drawn *Localidades* (neighbourhoods), the coordinates of **Alto dos Campitos** weren't well retrieved.

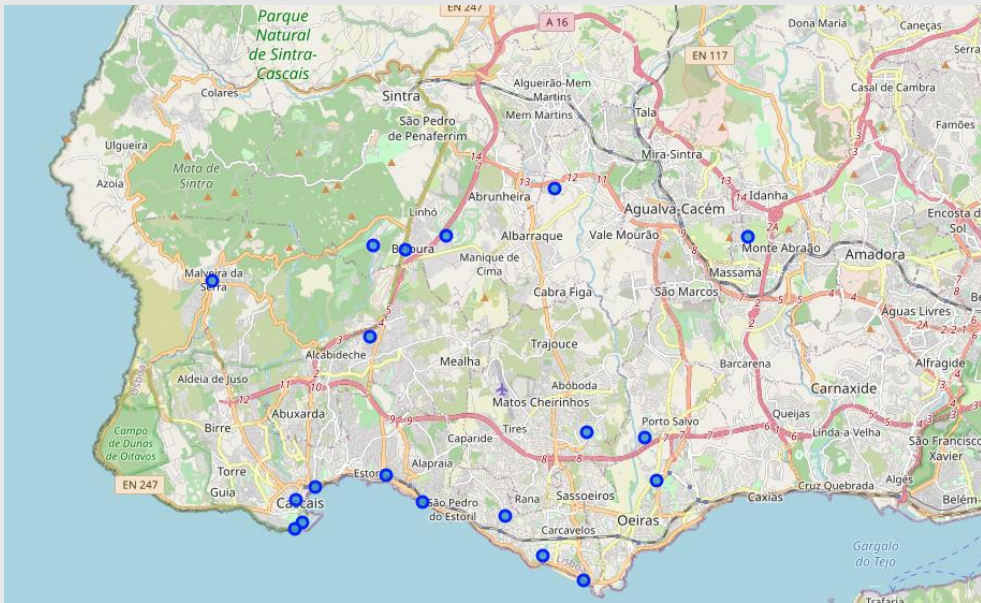
NEIGHBOURHOODS DISTRIBUTION



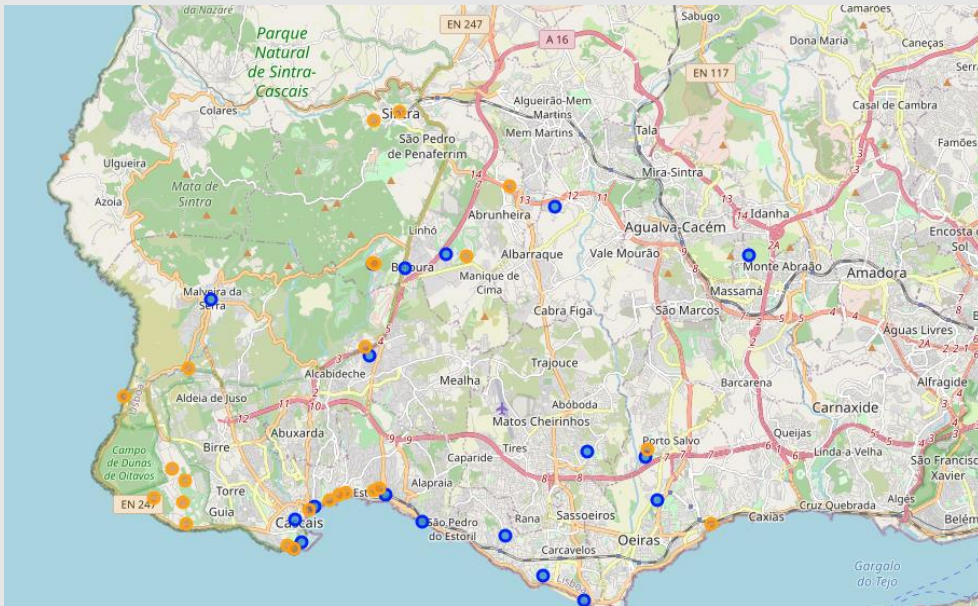
- Some neighbourhoods are really close to each other and this will result in overlapping areas of Foursquare API exploration, hence, duplicated venue entries. This will be handled by removing the duplicates.

RESTAURANTS DISTRIBUTION

- Most of restaurants are seaside.

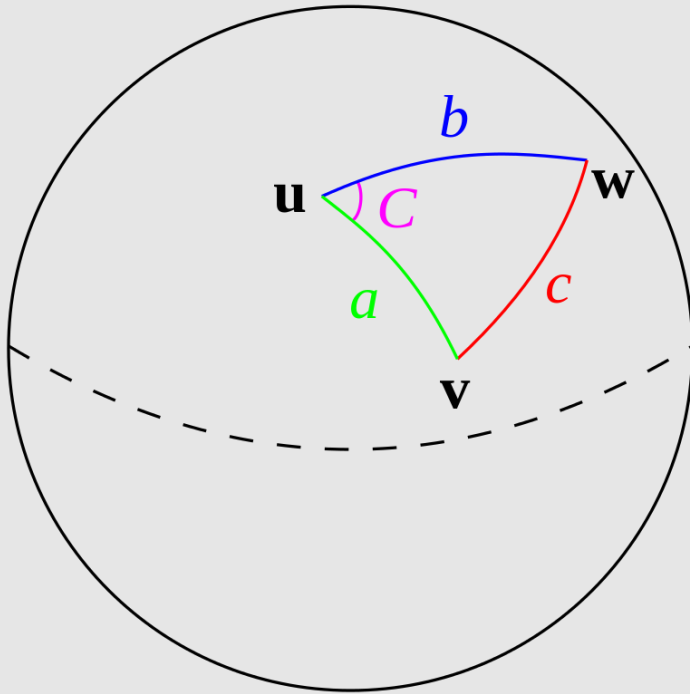


BOOKING PLACES DISTRIBUTION



- Booking places were drawn in orange, on top of the same map that showed Italian Restaurants in blue.
- We see the same pattern, most of them are also seaside.

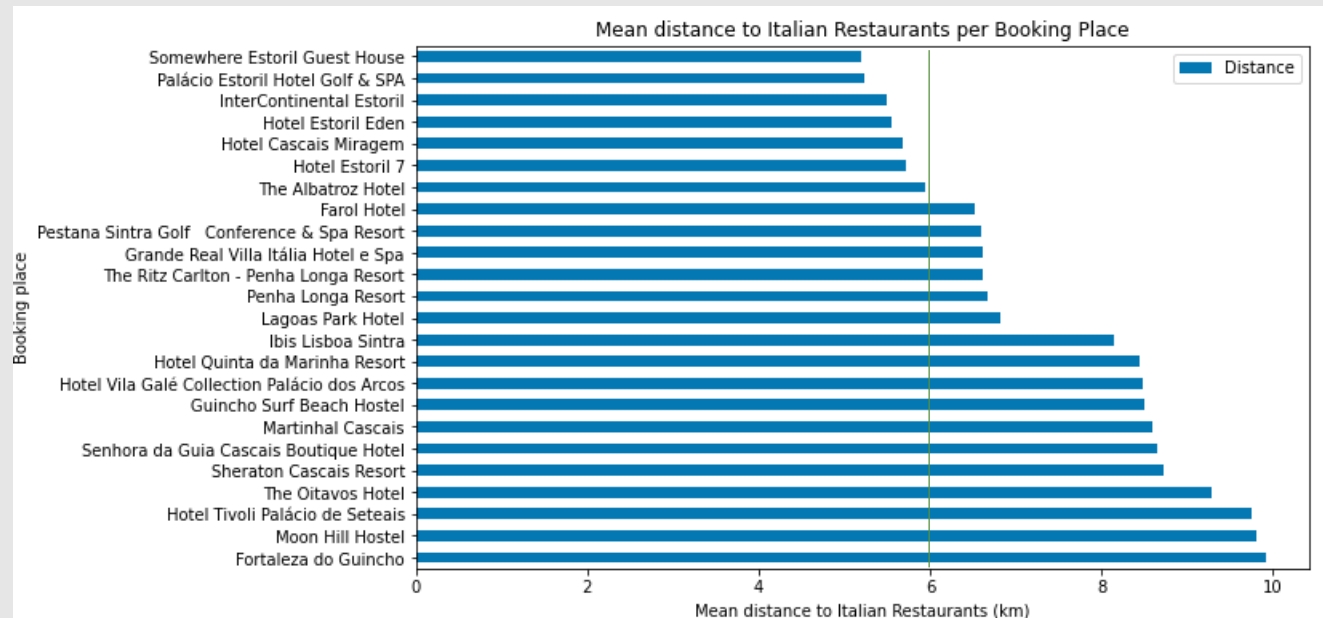
HAVERSINE FORMULA



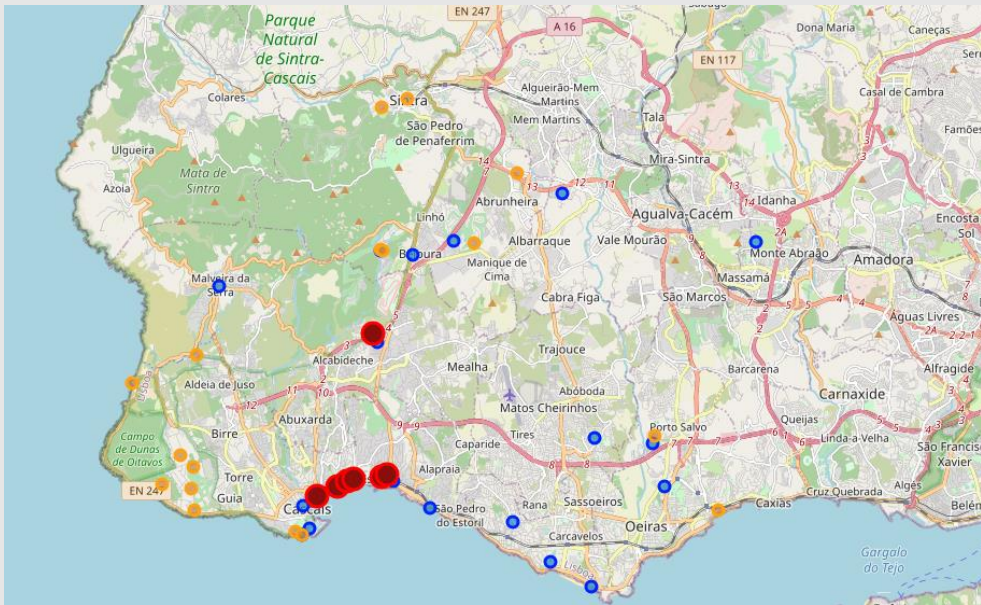
- Haversine formula determines the great-circle distance between two points on a sphere given their longitudes and latitudes
- This will calculate between each Booking Place and Italian Restaurant.

MEAN DISTANCE BETWEEN EACH BOOKING PLACE AND RESTAURANT

- There are a few under 6km distance, so that will be our threshold for the most suited ones.



MOST SUITED BOOKING PLACES



- The recommended Booking Places are drawn in red, based off on threshold of less than 6km.
- No surprise that most of them are seaside, as most of the Italian Restaurants are also seaside.

CONCLUSION AND FUTURE DIRECTIONS

- Even though this was a dummy example, the same idea can be used for different venue types, for instance, museums or other place of interests for tourists.
- Tourists could use this to find the most suitable place to be hosted in order to maximize their visit time based off their interests.
- With more data on the venues, for instance the pricing and the rating, and a more restrictive problem, having only X amount of days to visit and different venue types, I could have introduced a ML model to discover what optimal venues to visit and where to be hosted within X amount of days.