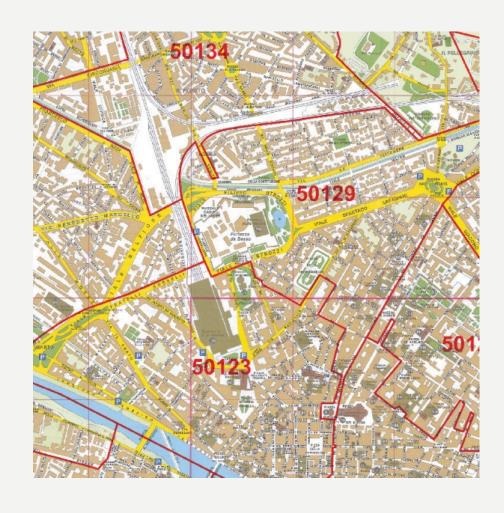
FINDING BEST RESTAURANT IN FLORENCE

CAPSTONE PROJECT OF FEDERICO PANNACCI

PROBLEM STATEMENT

My work try to reply to the following question:

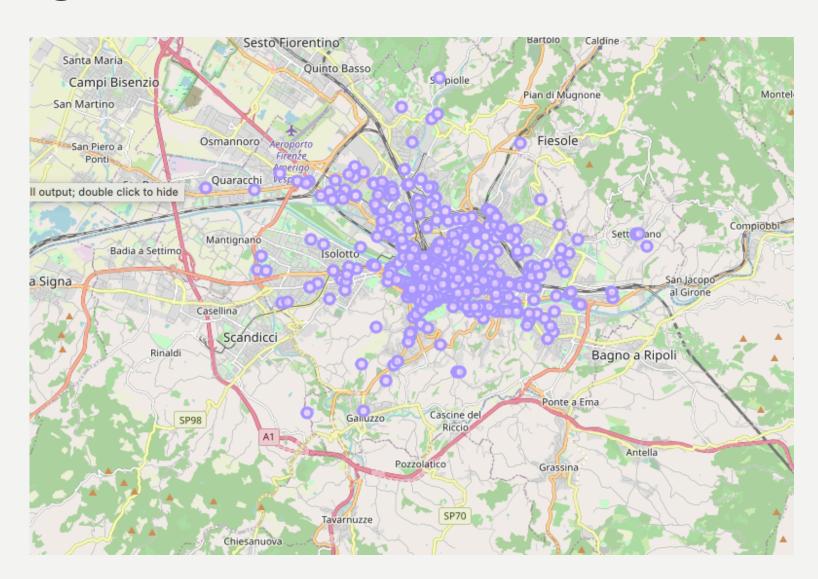
FLORENCE: Is better to open a "Tuscan" restaurant in CAP area 50127 or a "Pizza" restaurant in CAP area 50145?



I constructed the database by scraping data from TripAdvisor and evaluating Latitude and Longitude with geocoder

	Restaurant	Ranking	Reviews	Price	Cousine_type	Address	Phone	Area	Near	Url	Latitude	Longitud
0	CaffÃ" Italiano	4,0	1.083 recensioni	€€-€ €€	Italiana, Pizza, Mediterranea, Toscana, Italia	Via Isola delle Stinche, 11R-13R, 50122, Firen	+39 055 289080	Duomo	0,3 km da Piazza del Duomo	https://www.tripadvisor.it/Restaurant_Review-g	43.770131	11.26030
1	Gustarium	5,0	1.990 recensioni	€	Pizza, Mediterranea, Italiana, Fast food, Salu	Via Dei Cimatori 24/r, 50122, Firenze Italia	+39 055 283469	Duomo	0,1 km da Palazzo Vecchio	https://www.tripadvisor.it/Restaurant_Review-g	43.770654	11.25557
2	Degusteria Italiana agli Uffizi	5,0	689 recensioni	€€-€ €€	Mediterranea, Salutistica, Wine Bar, Italiana,	Via Lambertesca 7r A Pochi Metri Dal Museo Uff	+39 055 493 9867	Centro storico di Firenze	0,1 km da Gallerie Degli Uffizi	https://www.tripadvisor.it/Restaurant_Review-g	43.768834	11.25435
3	180 Grammi Burgers & Beers	5,0	80 recensioni	nan	Italiana	Via Pietrapiana 11/ R Via Pietrapiana 11/ R, 5	+39 055 386 0476	Santa Croce	0,6 km da Piazza del Duomo	https://www.tripadvisor.it/Restaurant_Review-g	43.771410	11.26581
4	Pitti Express	5,0	85 recensioni	€	CaffÃ", Wine Bar, Toscana, Salutistica, Fast f	Via Romana 40/r, 50125, Firenze Italia	+39 055 627 8178	Oltrarno	0,6 km da Ponte Vecchio	https://www.tripadvisor.it/Restaurant_Review-g	43.763190	11.24422

Then I plot all restaurants located in Florence.

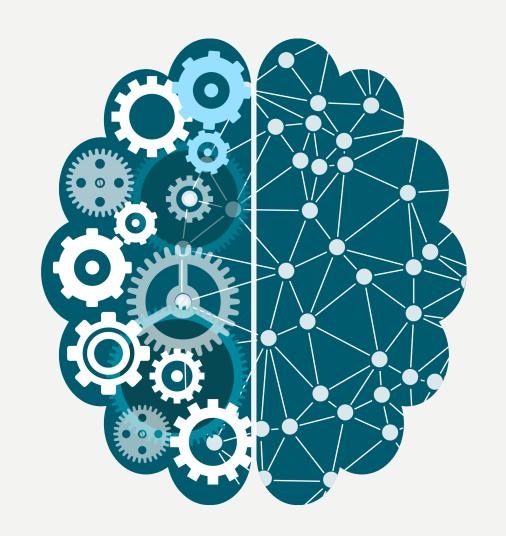


I cleaned the data for further application of ML algorythm



```
dic={'€':1,'€-€€':2,'€€':3,'€€-€€€':4,'€€€':5,'€€€-€€€€':6,'€€€€':7,'€€€€-€€€€':8,'€€€€€':9}
df['Price']=df['Price'].map(dic)
df['Reviews']=df['Reviews'].astype(str).str.replace(' recensioni','')
df=df[['Restaurant','Ranking','Reviews','Price','Cousine_type','Latitude','Longitude','CAP']]
df.Ranking=df.Ranking.astype(str).str.replace(',','.').astype(float)
df.Reviews=df.Reviews.astype(str).str.replace(',',').astype(int)
df['Price']=df['Price'].fillna(round(df['Price'].mean()))
df.Price=df.Price.astype(int)
df.head()
```

I applyed Support
Vector Machine
algorythm in order
to Classify data in
quality index classes.



CONCLUSION

I finally predicted values with algorythm and it resulted that is better to open a "Toscana" restaurant in 50127 area as it seems to have a higher class value.