Analysis of new Restaurant in Attica, Greece

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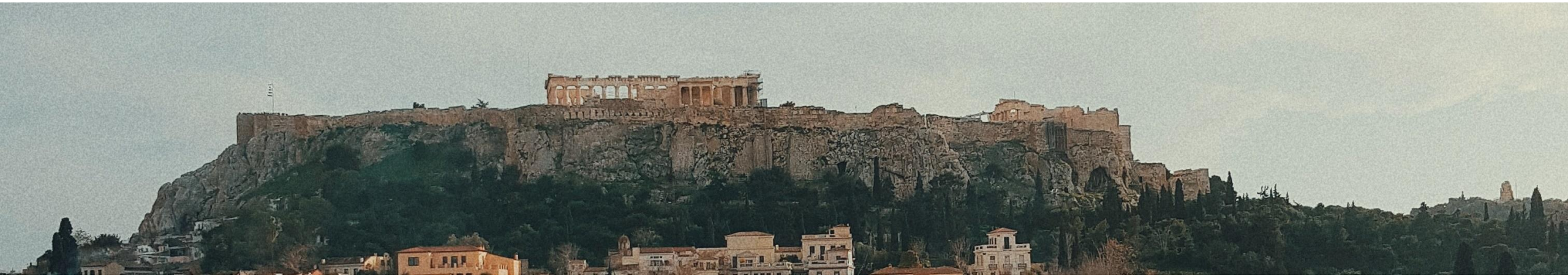
Introduction

Opening a Restaurant in Attica, Greece

Attica, Greece



- Cultural value
- Historical sites
- 5 million travelers each year (about 16% of Greece's total tourism)

Data and analysis

Data Sources

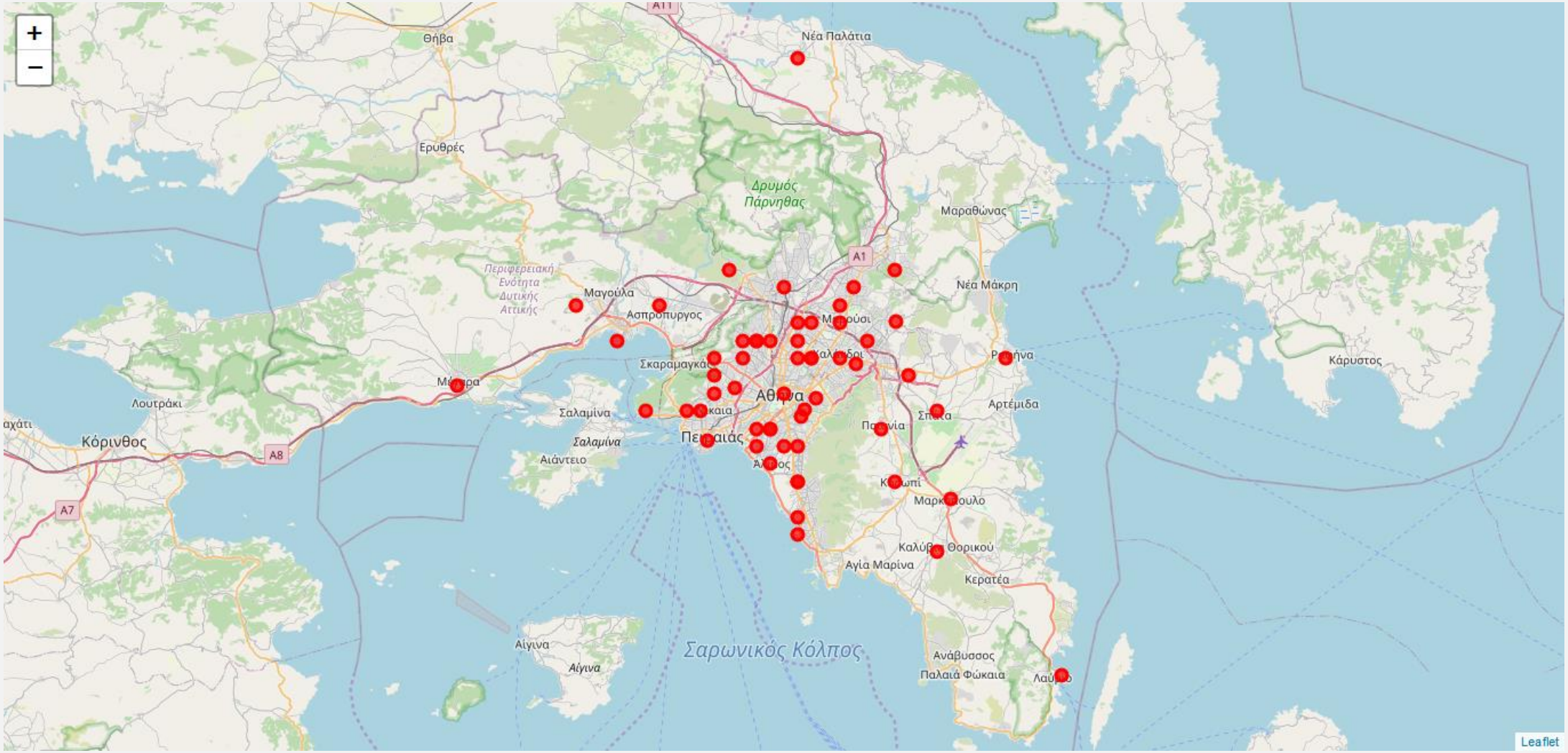
- Attica Municipalities with geographical coordinates
- Venues per Municipality - Foursquare Places API
- Financial Data for Property Rentals/Sales – spitogatos.gr
- Greek Municipalities Boundaries GeoJSON - Geodata.gov.gr

Techniques

- Panda DataFrames
- Folium Maps
- Clustering
  - Elbow Method for K - value
  - Kmeans algorithm

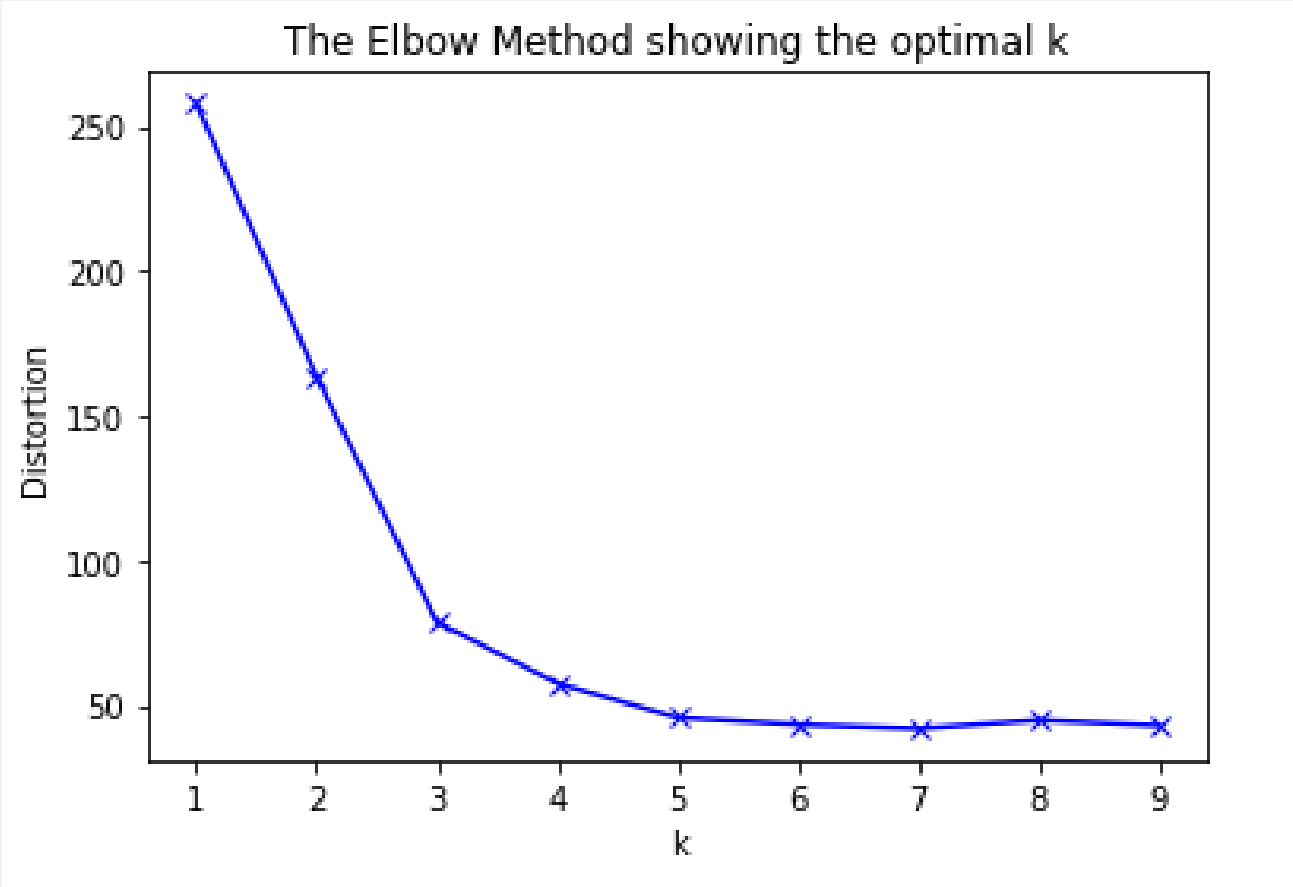
Results

Attica Municipalities



Determine K-value for K-means

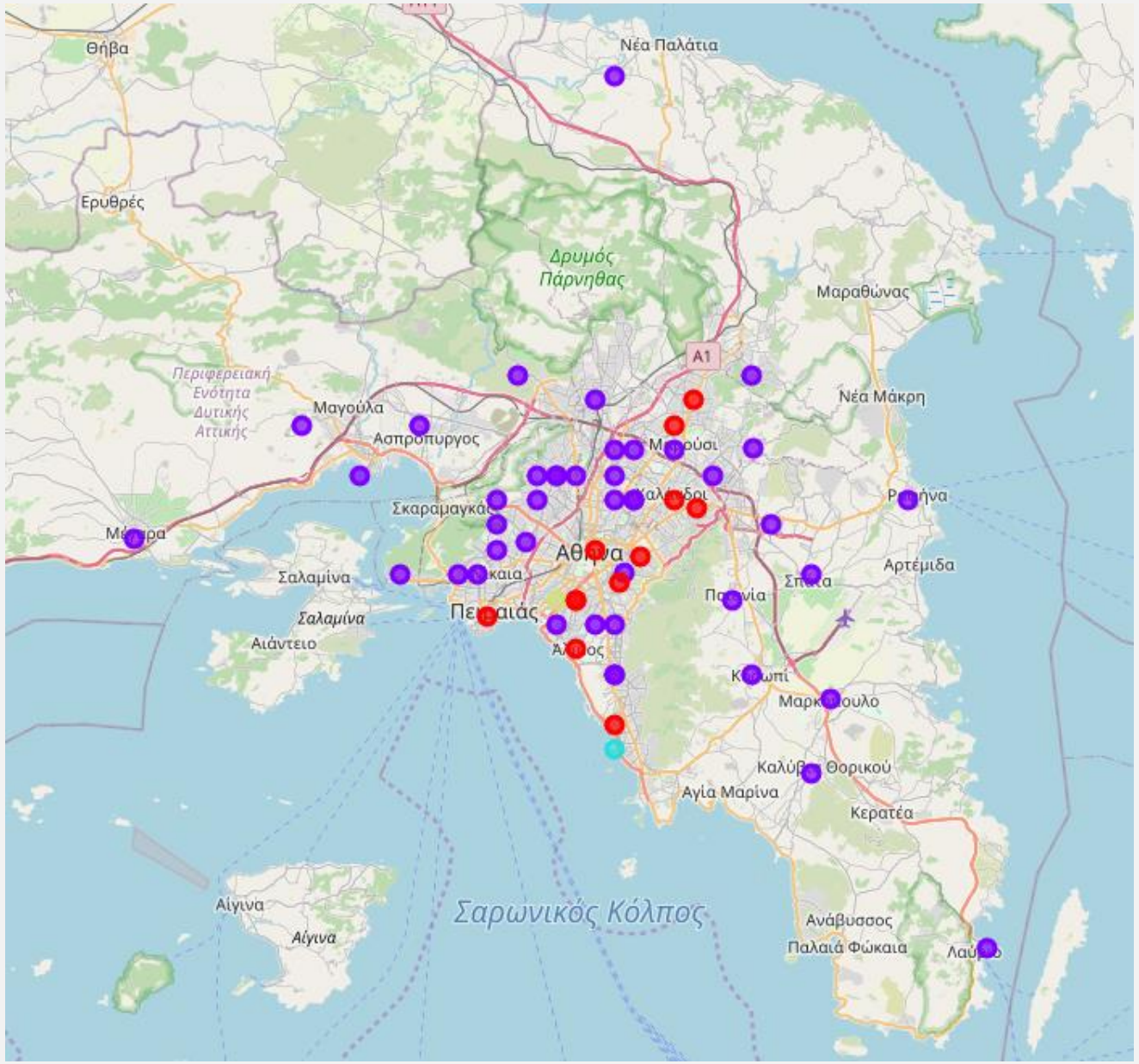
- Iterations of K-means analysis with different values of K
- Calculate and plot the distortion.
- Distortion equals to the average of the squared distances from the cluster centers of the respective clusters.
- Used Canberra distance
- Select the value of k at the "elbow"
- K = 4



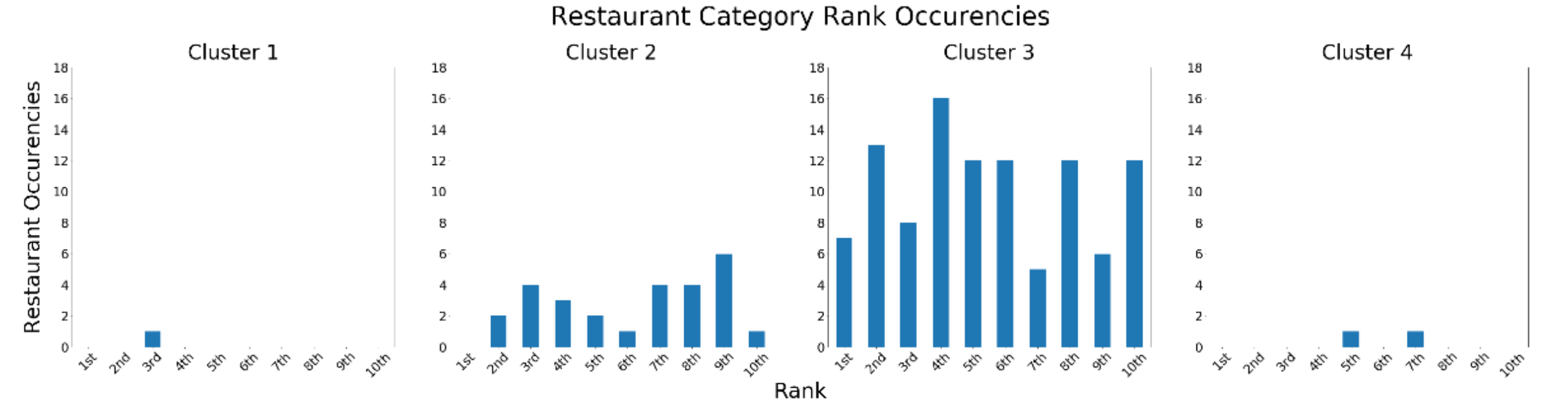
Clustering Municipalities

Markers Colors

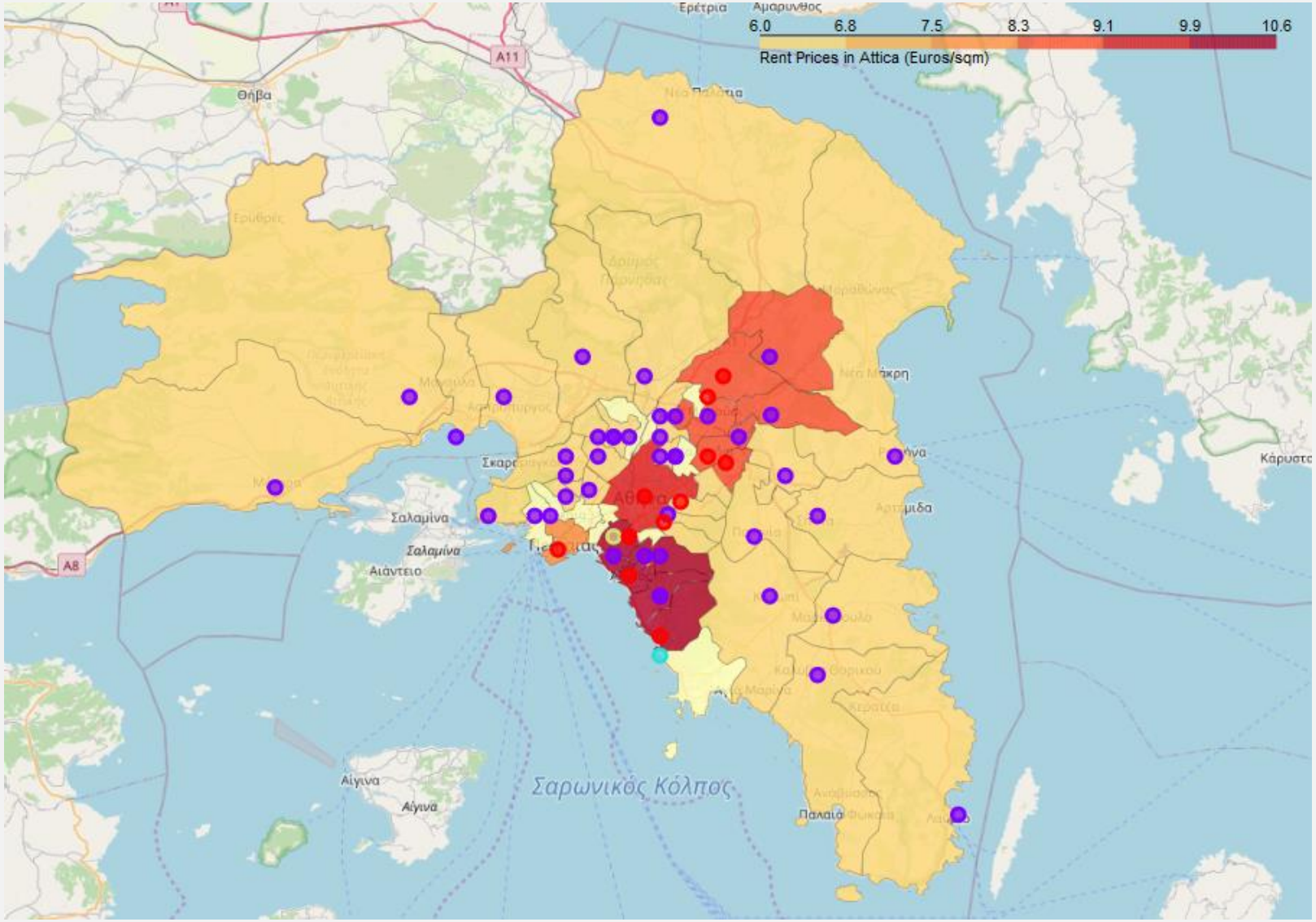
- *Green: Cluster 1*
- *Red : Cluster 2*
- *Blue: Cluster 3*
- *Cyan: Cluster 4*



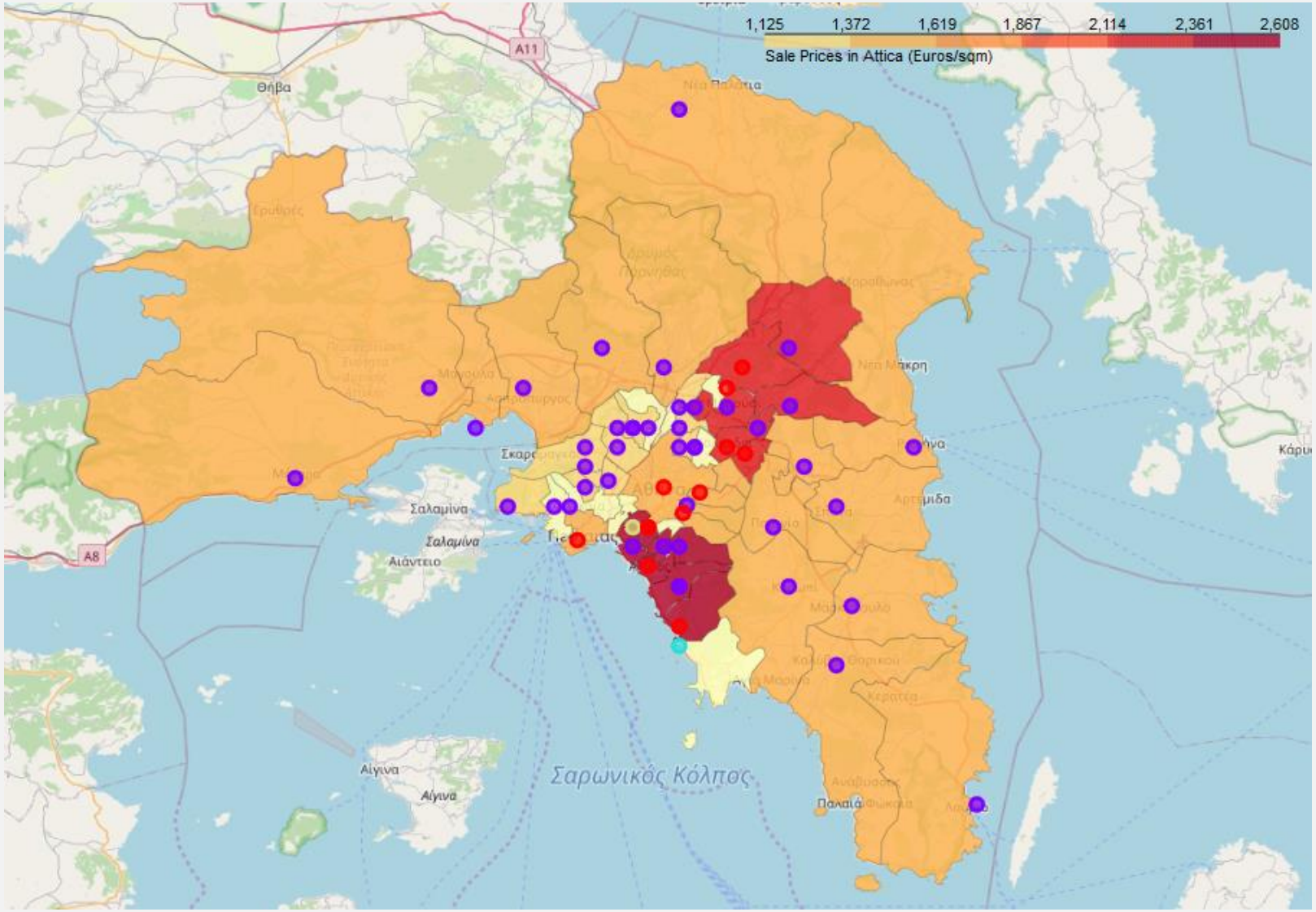
Restaurants per Municipality



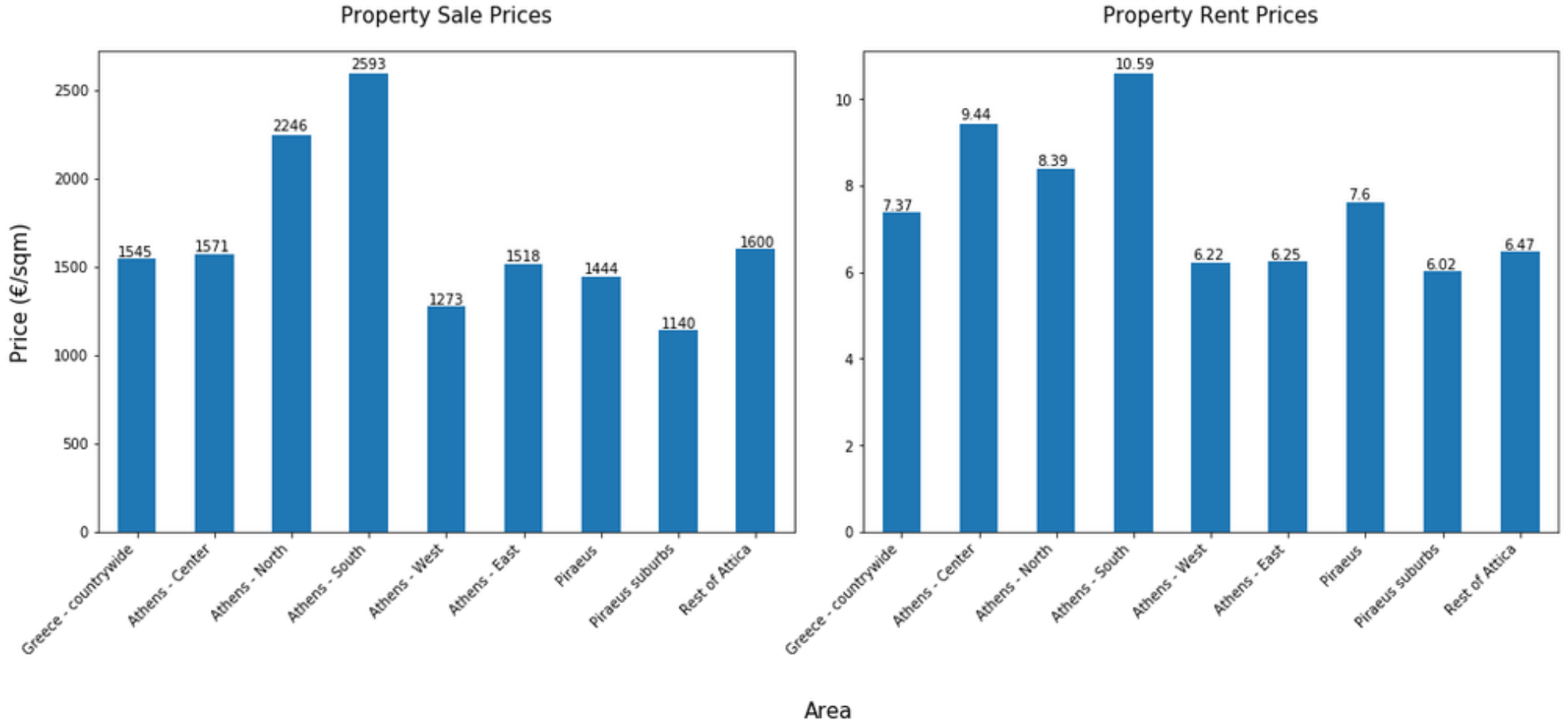
Property rent average prices



Property sale average prices



Property sale/rent prices comparison



Conclusion

Things to consider for future analysis

- Algorithms and dataset limitations
  - Use of differenent clustering method
  - Wider dataset to analyze
- More parameters to be considered
  - Customer ratings
  - Restaurant type
  - Cuisine choice
  - Local taste choices
  - Pricing schemes
  - Different datasets

THANK YOU