Applied Data Science

CAPSTONE PROJECT

FINDING AN OPTIMAL PLACE FOR A CAFÉ SHOP IN ATHINA CITY, GREECE

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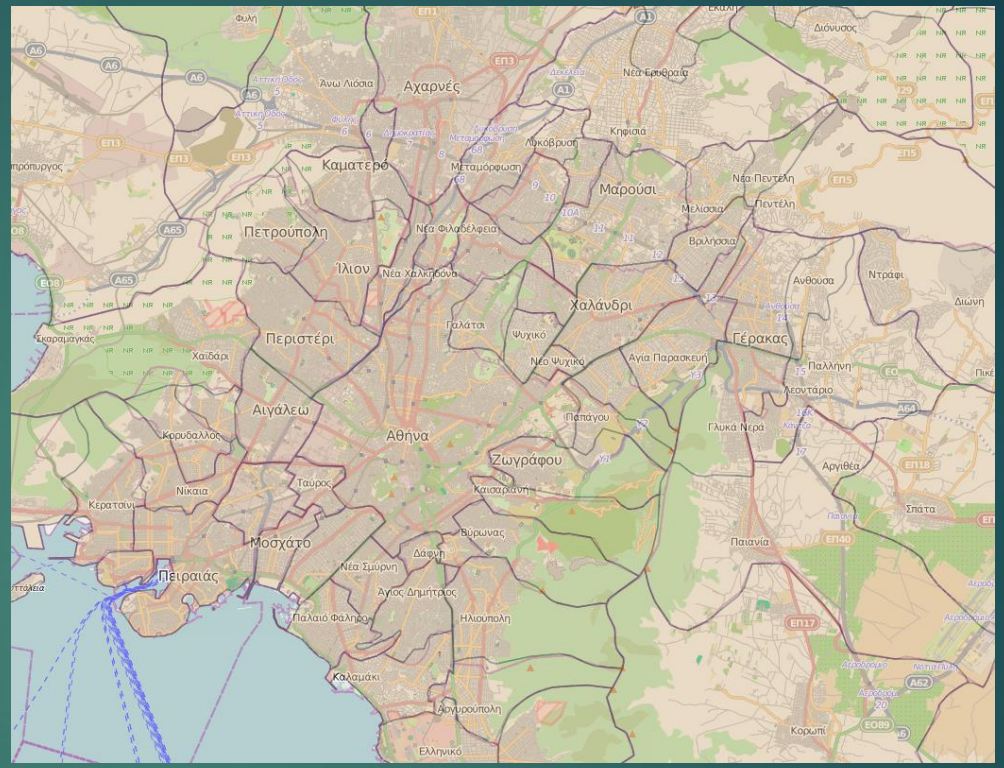
Introduction: Business Problem

- A close friend of mine asked me to help him with finding a good place for opening a **cafe in Athina, Greece**
- It doesn't matter in which borough in Athina his cafe is going to open as soon as it is in the center of a borough with a lot of similar shops.

Data

- http://geodata.gov.gr/



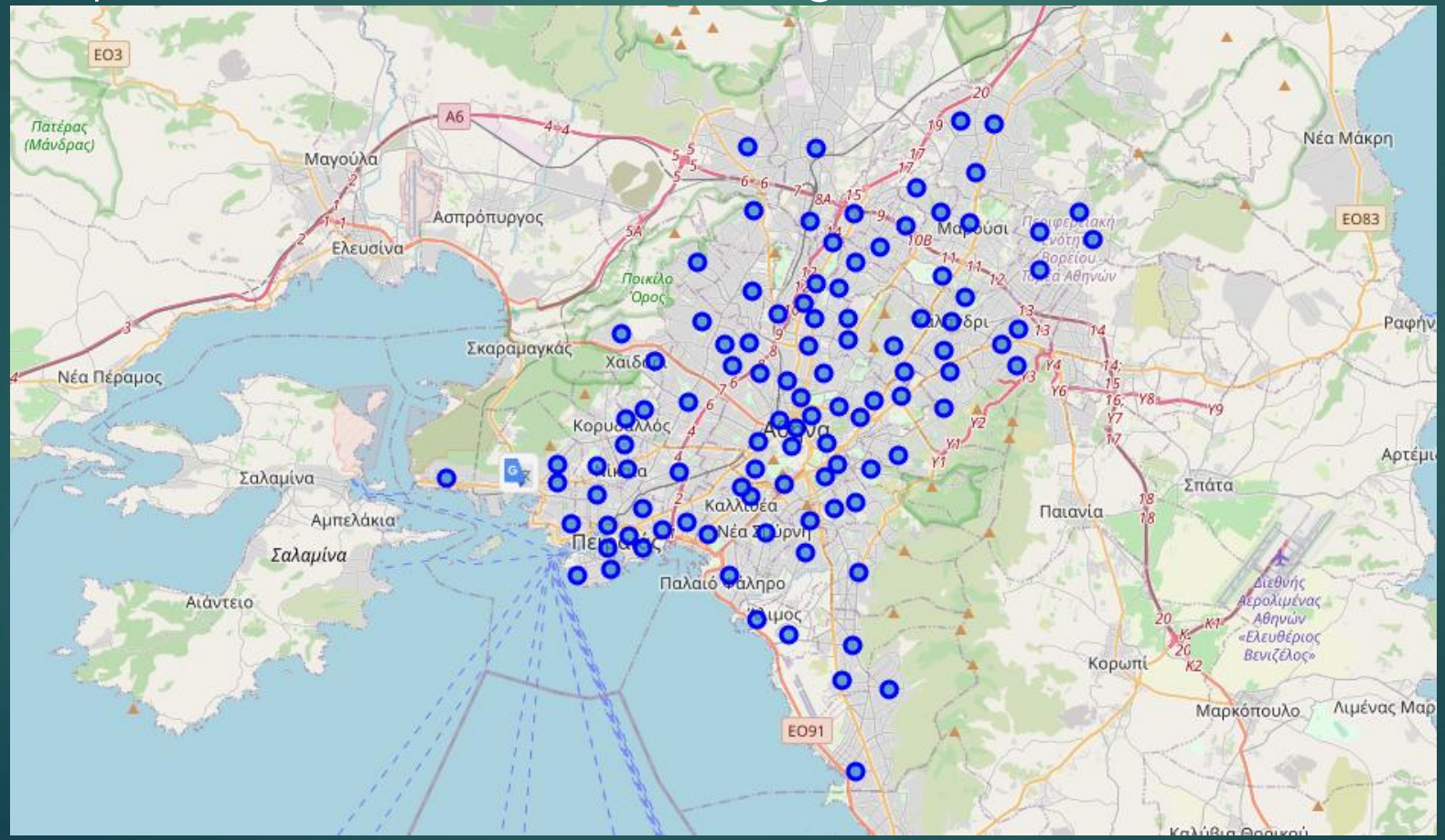
- https://foursquare.com/

Methodology

- 104 Borough Centers (coordinates)
- Information about shops around those centers (range <500m), according to Foursquare categorization
- Cluster boroughs into five clusters
- Choose the cluster that has a cafe shop as a first or second popular shop
- Propose one of these boroughs as an optimal place to open a cafe

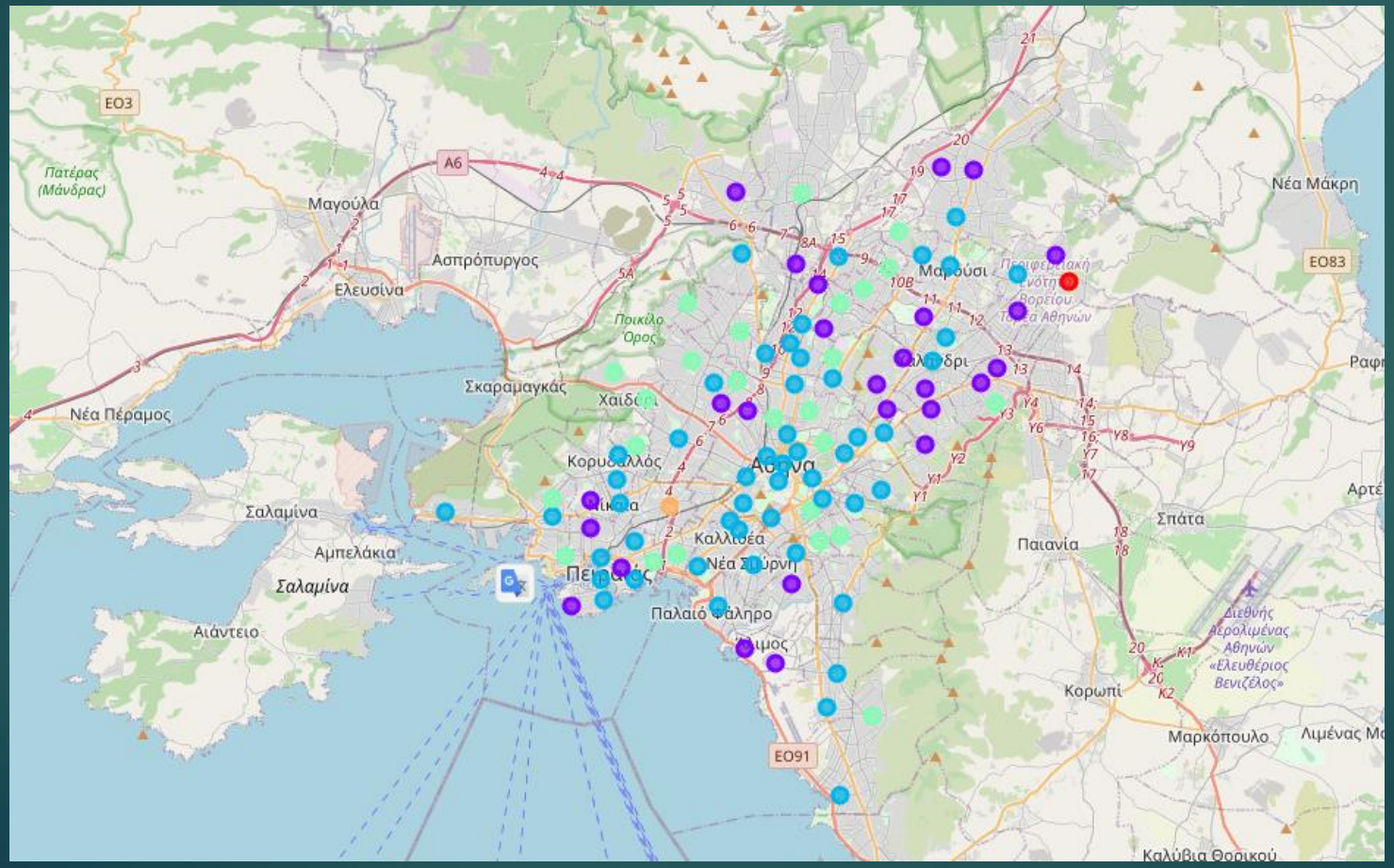
Analysis

- Map of Athina with the 104 borough centers



Analysis

- Map of Athina with the 104 borough centers, into 5 clusters

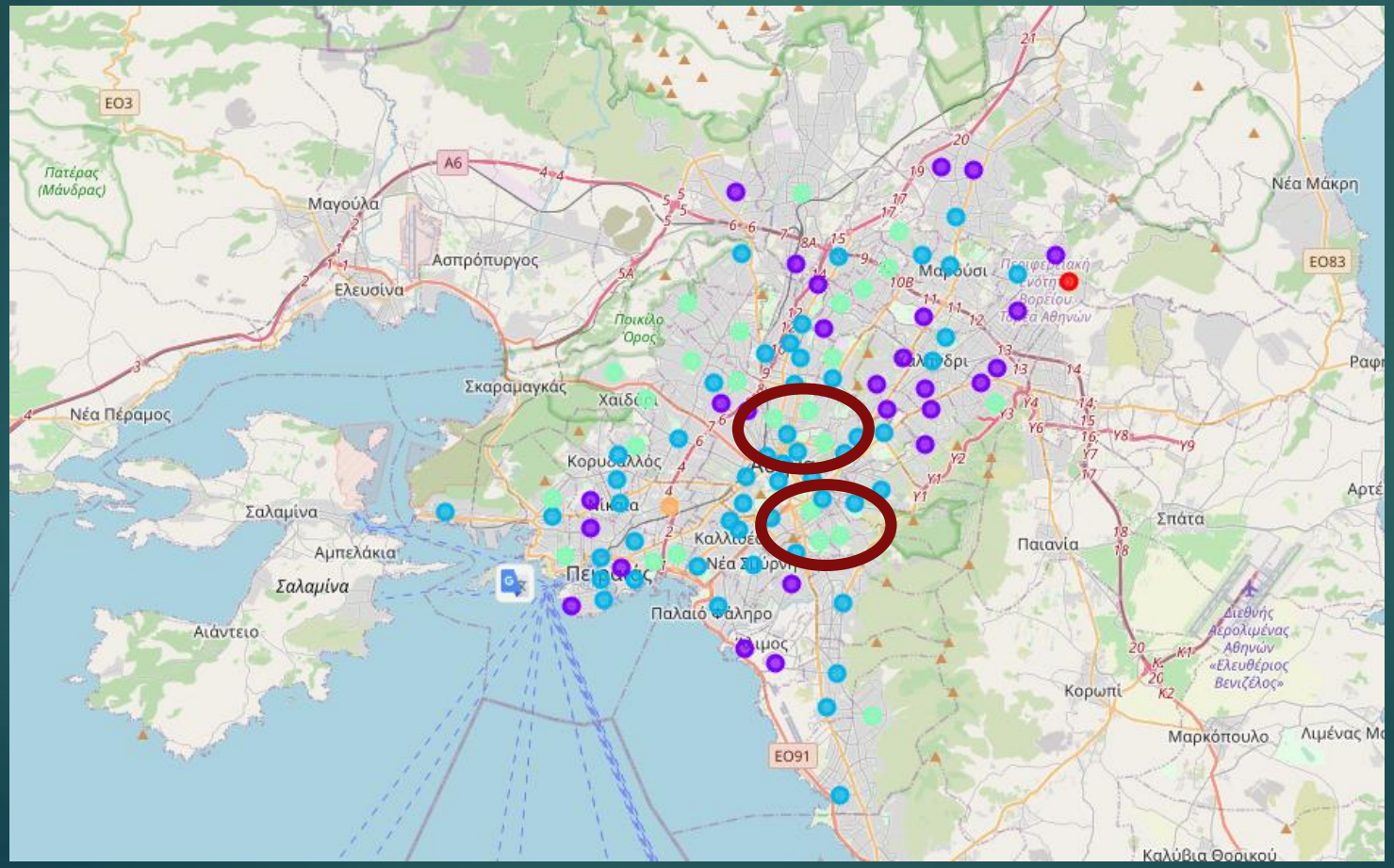


Results and Discussion

- Our analysis shows that cluster number 4 is the one with a high density of cafe shops, so these borough centers are candidates' places for our proposal.
- We will take only those centers that have a cafe shop as the first common venue.
- That choice narrows our results furthermore from 25 to 19 centers.
- Lastly, if we want something closer to Athina center, we have only 6 centers.
- We can propose any one of those 6 for opening a cafe shop.

Results and Discussion

- Map of Athina with the optimal borough centers



Conclusion

- **The purpose of this project was to find for a friend of mine an optimal location for a business operation in Athina Greece, specifically a cafe shop.**
- As my friend request, it doesn't matter in which borough in Athina his cafe is going to open as soon as it is in the center of a borough with a lot of similar shops.
- Our initial data includes 104 borough centers and after analysis, we cluster the centers into 5 clusters, we choose cluster number 4 as the most suitable and finally, we narrow down into 6 centers as optimal locations.
- *Of course, can be done more work and search these areas with more details.*


The End