



OPEN A NEW SHOPPING MALL IN CHISINAU, MOLDOVA

IBM Applied Data Science Capstone Project

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BUSINESS PROBLEM

- Chisinau is fast growing city which needs more shopping malls
- No malls in some neighborhoods(Codru, Durl esti) while there is a tendency towards increasing of urban areas
- What is the best location for a new mall in the city of Chisinau?

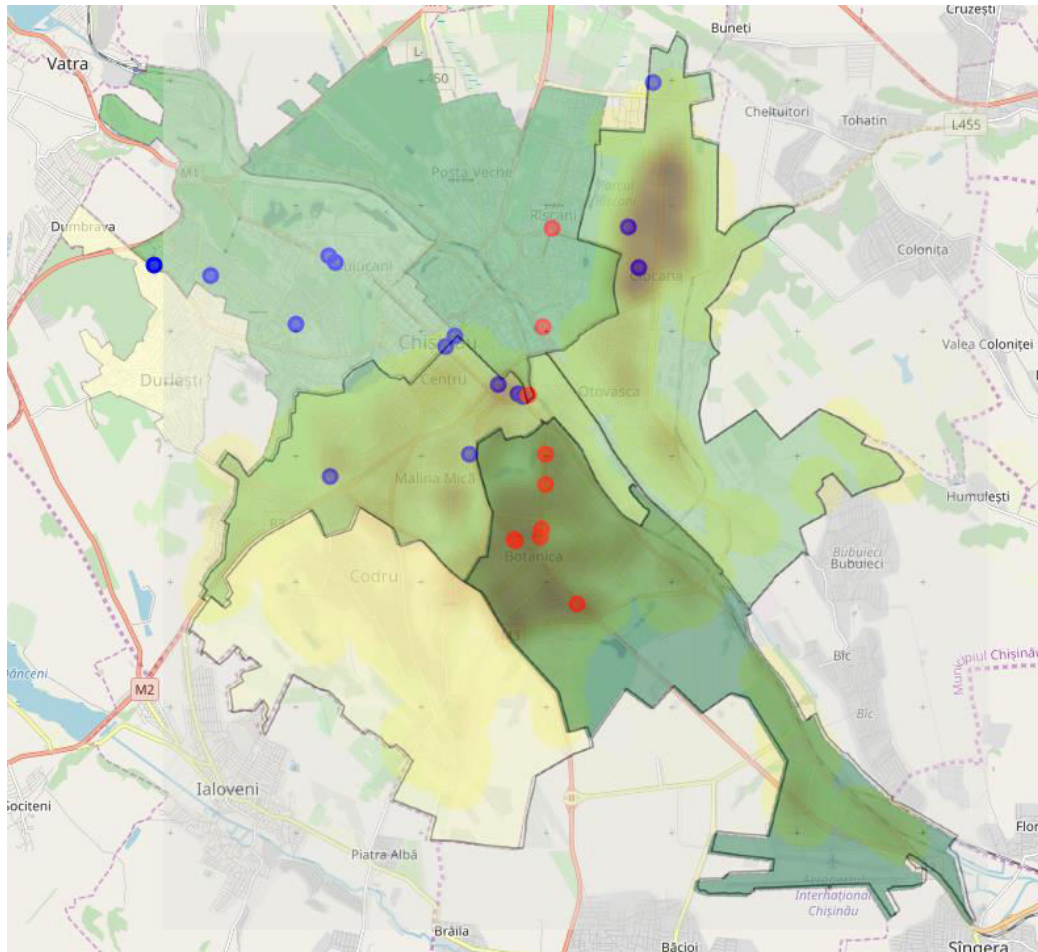


DATA

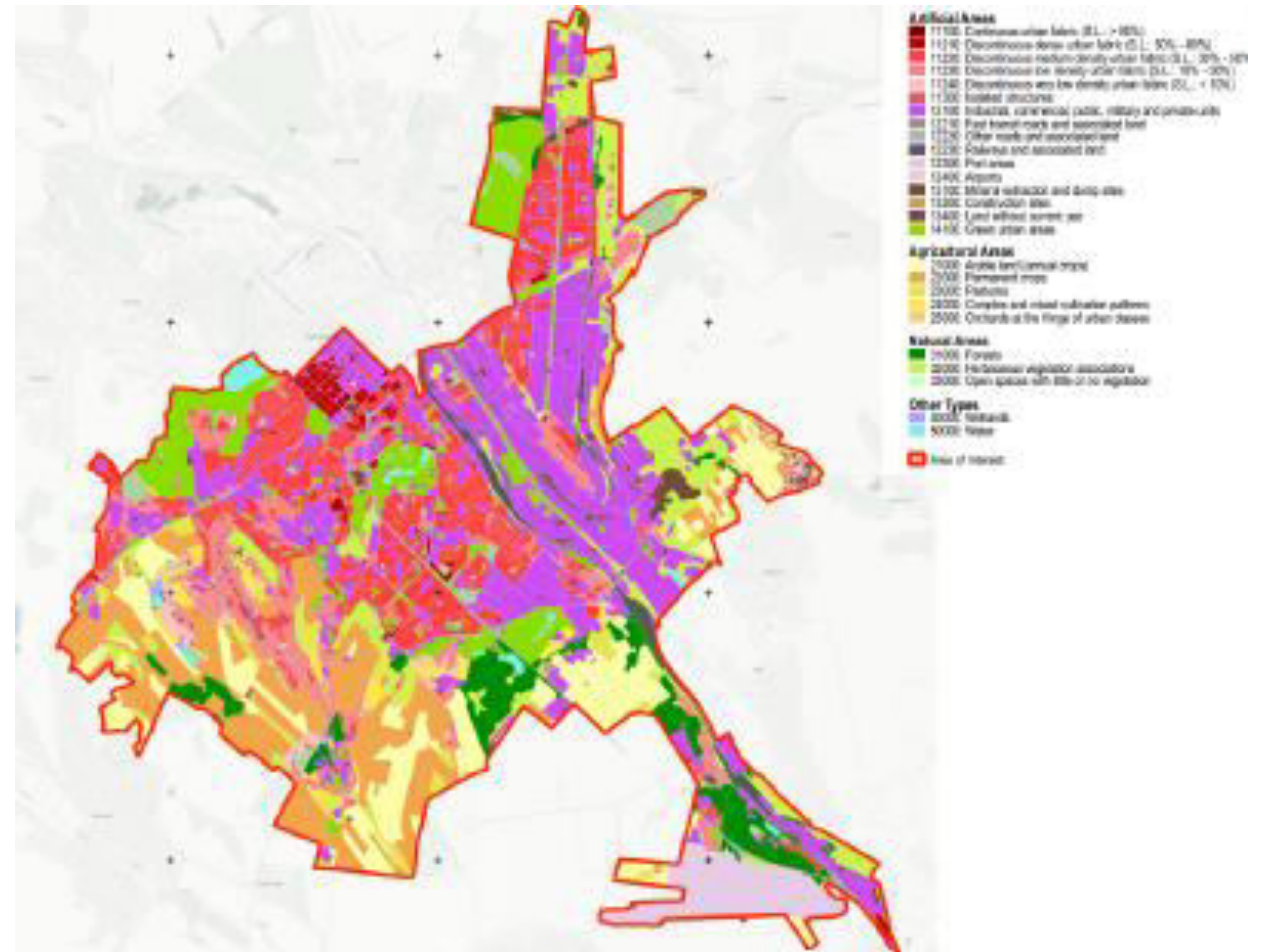
- Data used:
 - ❑ Chisinau neighborhoods names, locations and population
 - ❑ Foursquare API venues in Chisinau
 - ❑ Land use 2019 and changes in land use 2014-2019
 - ❑ Population density heat map in nighttime 2018

METHODOLOGY

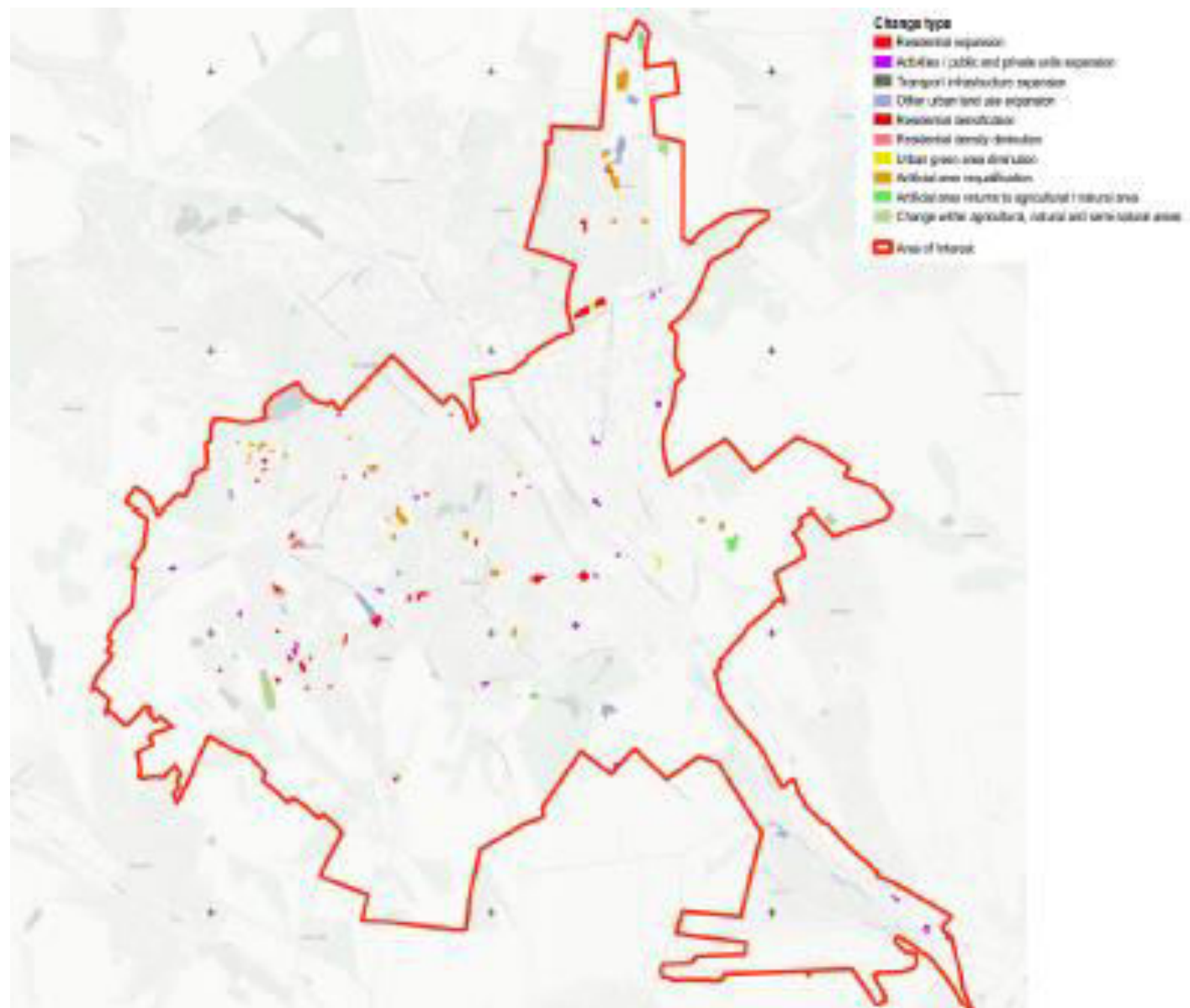
- Get and visualize Chisinau neighborhood data: borders, population, names
- Create choropleth map to see population distribution over Chisinau
- Get the list of the malls in Chisinau using Foursquare API and visualize it
- Use Kmeans algorithm to detect most potentially profitable neighborhoods
- Analyze also land use 2019, changes in land use 2014-2019 plots and population density heat map in 2018
- Detect the best neighborhood for a new mall in Chisinau



Population density heat map and malls location
(blue – cluster0, red – cluster2.



Land use 2019 Chisinau



Changes in land use 2014-2019 Chisinau



RESULTS

The results obtained from the KMeans algorithm helps us to divide neighborhood in 3 main clusters:

1. Cluster 0 - High population, med-high number of malls
2. Cluster 1 - Low population, no malls
3. Cluster 2 - Med population, med-high number of malls

Land use, changes in land use and population density heat map analysis showed that Codru is a fast growing neighborhood with no malls located



CONCLUSION

We have analyzed population distribution and malls location to identify the best location for a new mall. In order to do this we have used KMeans algorithm to cluster neighborhoods, also we have analyzed changes in land use 2014-2019 in the city of Chisinau and density population in nighttime which gave us useful insights. During analysis we have concluded that Codru neighborhood may be the perfect choice to build a new shopping mall.