



Segmenting and Clustering Hotels of Almaty City

Coursera Capstone Project

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GOALS OF RESEARCH

- **Almaty** is the largest city in Kazakhstan and it is the cultural and financial center of the country. The landscape of the city goes over the mountains where the nature views are awesome and of course there many venues for sightseeing. But despite of above features and cosmopolitanism the city is just on their first steps towards to the *world popular touristic destination*.
- This project will help potential tourists to find hotels for different types of trips based on *popular venues* analysis.

DATA

- For exploring the common venues of Almaty city **Foursquare location data** will be used as a source.
- As this report will be used by potential tourists the venues will be explored based on the Almaty city hotels data. The hotels data also can be explored from Foursquare location data.
- Let's assume the Hotels as the neighborhoods of Almaty.
- **Dostyk Street** will be the starting point of hotels and venues exploring. The above street is the center of the city.



METHODOLOGY

PYTHON LIBRARIES

- NUMPY
- PANDAS
- JSON
- GEOPY – NOMINANTUM
- REQUESTS
- PANDAS.IO.JSON - JSON_NORMALIZE
- MATPLOTLIB.CM, MATPLOTLIB.COLORS
- SKLEARN.CLUSTER – KMEANS
- FOLIUM

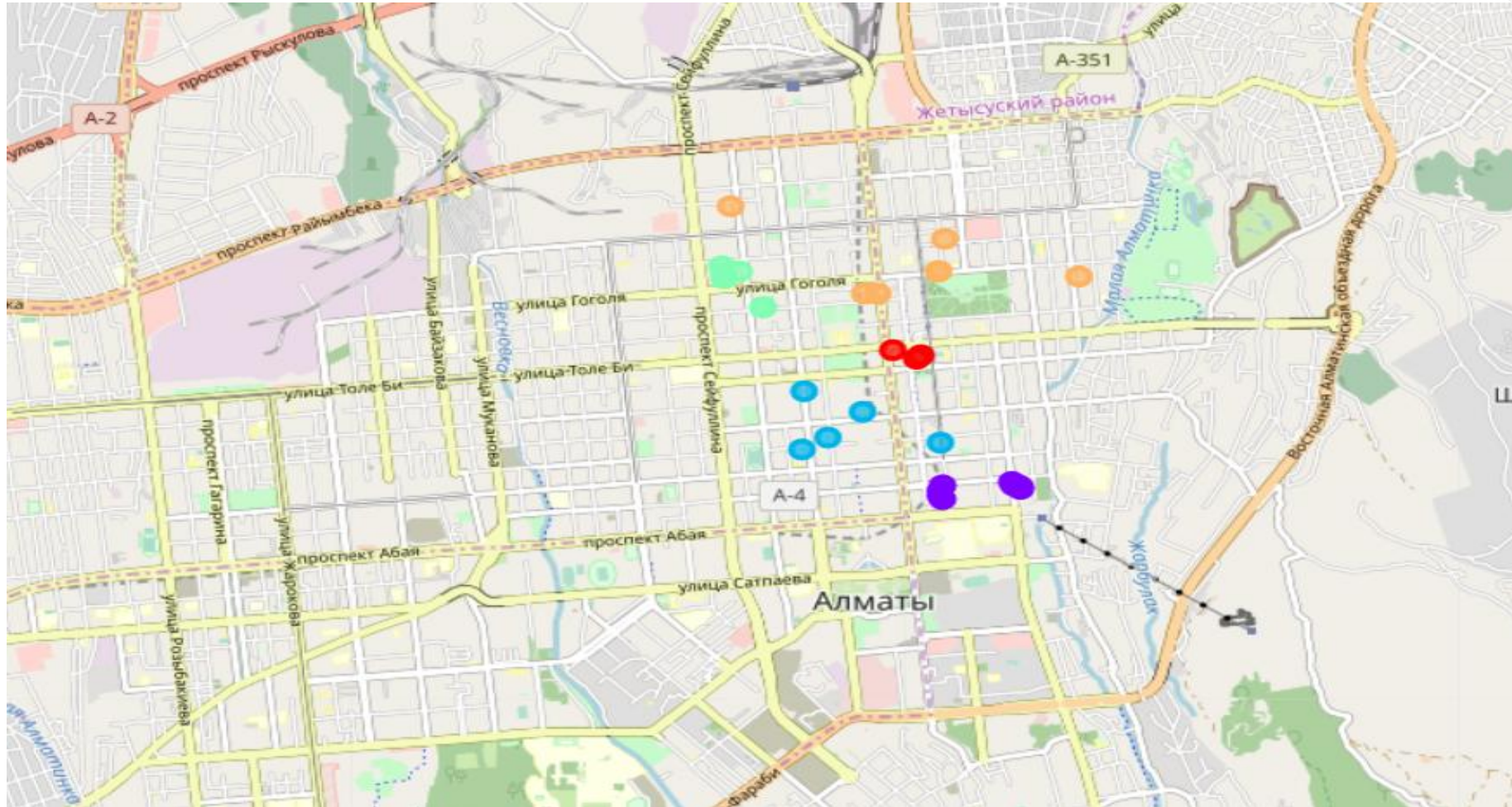
METHODS

- STARTING POINT →
- HOTELS →
- EXPLORE →
- VENUES →
- EXPLORE →
- NORMALIZE and GROUPING →
- EXAMINE →
- ANALYZE CLUSTERS

HOTELS NEAR STARTING POINT



CLUSTERING



RESULTS

CLUSTERS

- *CLUSTER 1* - "Short Business Trip Hotels"
- *CLUSTER 2* - "Long Business Trip Hotels"
- *CLUSTER 3* - "Culture Research Trip Hotels"
- *CLUSTER 4* - "Domestic Trip to Almaty"
- *CLUSTER 5* - "Enjoy Fun Hotels"



Thank you!

