Where to live in Kyiv?
Apartment rent prices, population density and venues analysis of city districts

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Introduction/Business Problem

Kyiv, the capital of Ukraine, is one of the biggest cities in Eastern Europe and the center of business in Ukraine. The city has a population of about 3 mln people, out of which about 2/3 are local work migrants. People from all over the country are trying to find work here, which resulted in a near double population increase in the metropolitan area from 2.5 to 5 mln during the last 10 years.

The first step for these local migrants is to find a place to live, which at least meets their minimum criteria. Often this is a big problem for people who are new in the city. Thus, the aim of this project is to help local work migrants to soften the problem of relocation to Kyiv. We implement this by giving the chance to look at the Kyiv map based on possible apartment search criteria, namely - wallet size (or apartment rent price), population density in different city districts and available infrastructure around specific sub-districts.

Data

For this project, we need the following set of data: a list of Kyiv districts and sub-districts, their locations, rent prices, population density, list of venues in different sub-districts. List of districts and sub-districts we downloaded from Wikipedia. Geospatial location data we received from OpenStreetMap service using geopy Python client. We use the SVDevelopment website to get the average rent prices. From the city administration website, we downloaded the information on population density. Finaly, we use Foursquare location data to download a list of venues in a radius of 500 meters around each sub-district.

Kyiv consists of 10 districts (borough), and 201 sub-districts. In the report we explore only 178 sub-districts as 29 of the observations were lost during the data cleaning process.

First, using the data mentioned above, our goal is to explore the diversity of Kyiv 10 districts based on the average apartment rent price and different population densities. Second, we want to compare all sub-districts and determine how similar or dissimilar they are. Third, we show all this information on the Kyiv map to simplify the decision process for our imaginary work migrant.