The Best Place to Open a Restaurant in the City of Kyiv, Ukraine

Recommendation

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Introduction

1.1 Background

Every potential restaurant owner is interested to find a location for his business that satisfy the following criteria:

1. Located in a densely populated area for higher chances of attracting customers
2. Popular with clients
3. Customers should be willing to spend decent amount in the restaurant
4. Convenient logistics
5. Some perks to fend off competition

Introduction

Business Problem

In this project we will try to find an optimal location for opening a restaurant in Kyiv, Ukraine near the center within 6 km radius. Kyiv is the capital and most populous city of Ukraine, located in the north-central part of the country on the Dnipro River. The population of Kyiv is 3 million people, making Kyiv the 7th most populous city in Europe. Kyiv is an important industrial, scientific, educational and cultural center of Eastern Europe.

Introduction

Business Interest

Our first objective is to find zones in the center of Kyiv, which are most densely populated with restaurants and try to identify key factors that contribute to the popularity of those areas.

Our second objective is to detect locations that are not already crowded with restaurants. We would also prefer locations as close to Kyiv Center (Kreschatik Street) as possible.

We will use our data science skills to generate most promising neighborhoods based on this criteria. Advantages of each area will then be clearly expressed so that best possible final location can be chosen by stakeholders.

Data Acquisition, Cleaning, Visualization

Data Sources

To convert an address into latitude and longitude coordinates of Kyiv, Ukraine we used geopy.geocoder library with Nominatim module.

We also used foursquare API to scrape the addresses of all places that are within 12 kilometer radius from Kyiv Center (Kreschatik Street) and also satisfy search query “food”. We found 100 locations that meet our search criteria.

Data Acquisition, Cleaning, Visualization

Data Cleaning

I used requests Python module that takes care of both retrieving JSON data and decoding it, due to its built in JSON decoder. Once I had my data in a dataframe format I filtered the columns (only columns containing information relevant to our study were left). Redundant information in rows was also removed.

Data Acquisition, Cleaning, Visualization

Data Visualization

I used Folium Library for visualize obtained data locations on a map. Kyiv Center was marked as a red circle and each location within 12 kilometer radius that meets search criteria “food” was marked on a map as a green circle with a name displayed if you click on a circle.