SELECTION OF A PLACE FOR NEW RESTAURANT IN MOSCOW

Dmitry Zaytsev

FINWERK.TECH

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1. Introduction

1.1 Background

My client, an investor and owner of catering and restaurant business, has requested a research which helps him to select a place for his new restaurant. His business operates in Saint Petersburg mainly and his primary goal is to expand it to Moscow choosing an anchor place as a part of his expansion strategy.

There are a few constraints my client expressed during an interview:

- rent vs. buy to minimize the CAPEX;

- the total area should be from 80 to 150 sq.m.;

- the place should be around some popular public spots – i.e. walking traffic should be good

1.2 Problem

Commercial property lease market in Moscow is not so huge, major listings usually yield from 10 to 20 thousand of commercial rental lots. But of cause, even if we narrow down the search by several factors (total area, price, suitability for cafes/restaurants, store-front) the search you'll end up with 2-3 thousand lots.

Second thing we need to act quickly to decide since the market is quite dynamic – site visits for 2000 places cannot be made in a short period of time rather than hire an expensive team of real-estate agents for this project.

So, the major goals I aim to solve are:

- Understand what topmost factors (features) influence the price of rental property;
- Segment the lease property by key factors;
- Analyze competitors in nearby locations;
- Form the short list of locations to be presented to the client based on exploratory data analysis, analysis of segments, and analysis of competitors;
- Predict the lease prices of the selected properties using suitable model and features for future negotiations with property owner.

1.3 Interest

Our analysis shall minimize the time and cost of the research for the client and narrow down the search of the place for a new restaurant to a short list with the highest potential. It will also give us the tool of price prediction for negotiations with property owners, i.e. if the price is -over or -under estimated.

2. Data acquisition and cleaning

2.1 Data sources

I shall use 3 data sources:

1) Cian.ru – a public database of real estate including commercial property lease options. I shall retrieve all details about a commercial lease including but not limited to: price, total area, building and property characteristics, location, address and property owner information. The data shall be cached, cleaned and prepared for the further EDA. Main issue with this source is

that it provides only paid API but luckily web-scraping allow us to retrieve JSON data for all features;

2) Foursquare API – to analyze the competitors around the places I found using geocoding data in the first source of data. I shall use the API to explore similar places of interest (restaurants and cafes) nearby the places found on cian.ru, their ratings should also be a part of analysis – e.g. places with low rating shall leverage the rating of our client's restaurant.
3) Google Maps API – to find the proximity data for each place (to the nearest metro station, to the center of Moscow). These data shall be used in the EDA to understand how much influence it makes on the price of lease property. as

The list of data sources shall be clarified during data analysis and elaboration of the key features.