Lifestyle Analysis of Paris

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Introduction

Problem and Background

Paris is an amazing, multicultural, diverse, dynamic and compact city. Paris is also one of the most expensive cities of the world. After living in the Paris Area for 10 years, my girlfriend and I decided to buy an apartment in Paris to settle in a neighbourhood we like.

Paris is divided into 20 arrondissements and 80 administrative neighbourhoods and 300 cadastral sections. Studied neighbourhood areas are the Paris administrative neighbourhoods.

Our criteria used to define a good location are:

- Presence of prefered restaurants, activities, métro stations
- Number of parks, opened markets, minimarket, schools
- Distance from the center of Paris
- Housing buying price

This report will determine if a correlation exists between the previous three independent variables (qualitative and quantitative) and the mean buying price within a neighbourhood.

In a second stage, we'll try to come out with the most attractive neighbourhoods based on our weighted requirements.

Other correlations could also be assessed:

- What parameter impacts the most the area buying price?
- Does AirBnb houses impact the area buying price?

Data Description

To consider the problem the following data sources are used:

Source	Description	Type
Newtable	Last opened restaurants	Website + Personal Notebook
Etalab	Past real estate buying prices (last 5 years)	Source Code
Paris Data	Arrondissements + Administratives Neighborhoods coordinates	API + API
	Houses rental cap 2019	API
	Events and activities	API
	Parks and green spaces	API
	Opened Markets	API
RATP	Metro Stations	API
Inside Airbnb	Available hosts list for temporary rents	API
Overpass	OpenStreetMap API	API

More details:

- **Newtable** is a website of restaurants that my girlfriend uses to consult whenever she wants a trendy place. It mentions the opening date showing the last tendencies. That's also the opportunity to apply some web scraping applications.
- **Etalab** is French Government department whose missions are to manage opening and sharing policy of public data (since October, 2019). One of its dataset contains all the last real estate buying prices of France territory.
- **Paris Data** is the Paris city website that gathers several datasets under the ODbL (Open Database Licence) as administrative mapping, specific places (park and markets), activities and rental price cap.
- **RATP** is the Parisian metro operator.
- **Inside Airbnb** is an open API that shows all available homes and apartments. It will be used to determine the touristic places.
- **Overpass** is a read-only API that serves up custom selected parts of the OpenStreetMap data. We'll use it to geocode addresses and eventually to get other location information.

Other investigated sources:

- **Foursquare API** is an easy to use database, however it is not the most used in Paris and so doesn't match with our habits.
- **SeLoger** is the most used application for research of housing location or buying in France. However it doesn't provide an official API (only a few customized GitHub Notebooks have been made).
- **Booking.com API** is only open to affiliated partners that should have travel related contents and a high amount of daily visitors.
- **Kaggle** is a "huge repository of community published data & code" but doesn't have good data about Paris.
- **Data Ile de France** is a similar data of Paris Data but for the full Region of Ile de France.
- **Google Maps Geocoding API** should be the best Geocoding service but it is unfortunately not free (0.005 USD per Request).
- **Trip Advisor** does not grant access for purposes of data analysis, research, testing, or similar uses.