Identifying potential areas for investment, analysis of Paris



Context and objectives

- Paris is a very dynamic city which attract investors from the entire world.
- It is very dense, concentrated and competitive.
- The price of real estate is one of the major obstacle for investors.
- How can we identify neighborhoods that could constitute an opportunity
 - → fair price and great potential of business.
 - >Gathering venues, social and economic indicators of each neighborhood;
 - > Clustering, analyzing determine suitable areas for investing;
 - Recommendations and further investigations.

Data acquisition

• Collecting data from different sources (<u>Atelier Parisienn de l'urbanisme</u> (<u>APUR</u>), <u>Institut national de la statistique et des etudes économiques (INSEE)</u>, <u>data.gouv.fr, Chambre des notaires de Paris</u>) composed of social and economic variables which could represent the attractivity of an arrondissement.

Evolution of housing price (5 years)

Median income per household

<u>Number of hotels</u> <u>Number of rooms</u>

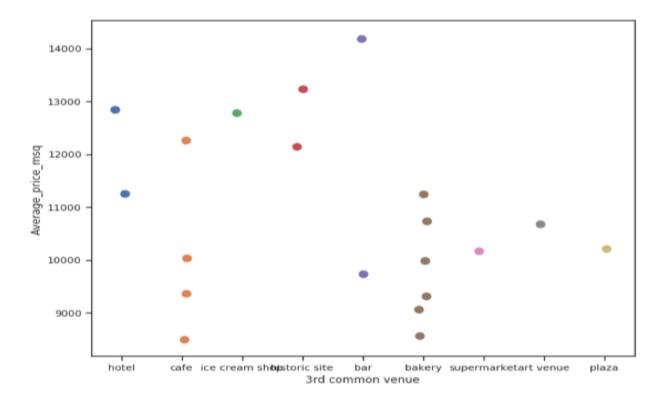
<u>Hotel grade</u> <u>Poverty rate</u>

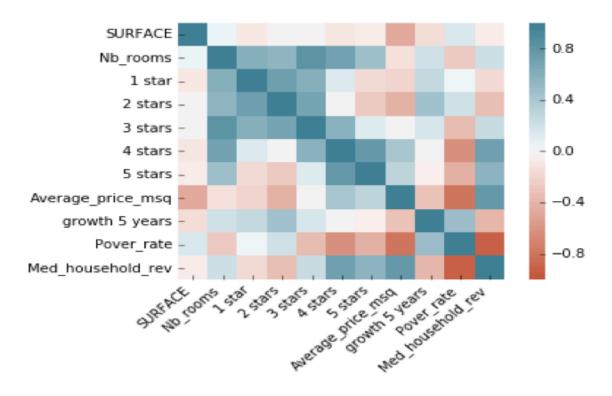
<u>Housing price</u> <u>Coordinates</u>

<u>Surface</u>

Preliminary insights

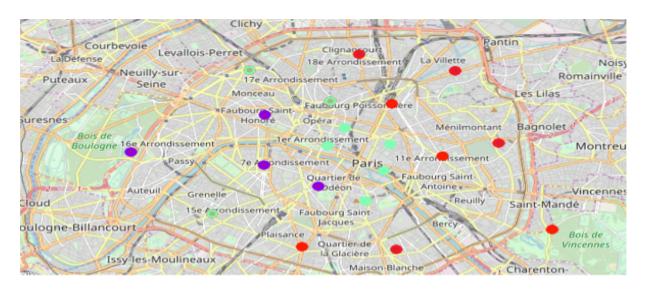
- The higher the median household income in an arrondissement the higher the number of hotels and the price per meter square;
- The lower the poverty rate the higher the business potential of an arrondissement (higher household income, more hotels, higher price per meter square);
- The type of hotels that have the greater capacity of accommodation (number of rooms) are the 3 and 4 stars;
- The higher the surface of an arrondissement the lower the housing price;
- The type of venue does not have an impact on the level of economic and social indicators.





Segmentation and clustering

- Clusters geographically separated:
 - ✓ East side and outskirts of Paris (cluster 0 in red) → "low income"
 - ✓ Center (cluster 1 in pale green) → "high income"
 - ✓ West side (cluster 2 in violet) → "middle income"



Cluster's profile

Cluster	Dominant type of hotel (relatively to the other clusters)	Average housing price	Poverty rate	Household income
Low income	1 and 2 stars	low	high	low
Middle income	3 stars	average	average	average
High income	4 and 5 stars	high	low	high

Conclusions and recommendations (1/3)

- Investing in a property or a building is in one the neighborhoods of Paris is quite free of risk due to the growing demand and the touristic hub it constitutes.
- Choosing between neighborhoods will heavily depend on the investor profile.

Decision matrix for an investor willing to acquire a property or a building

Investor profile	Risk aversion	Capacity of financing	Period of investing	Suitable cluster
Investor 1	High/ayorago		Short/mid/long-	
	High/average	High	term	1
Investor 2	Low		Mid/long-term	2 and 0
Investor 3	High	Avorago		2
Investor 4	Average/low	Average	Mid/long-term	2 and 0
Investor 5	Low	Low		0

Conclusions and recommendations (2/3)

 Using the classification allows to identify "undervalued" neighborhoods based on their indicators relatively to the cluster it belongs to.

Identification of potential neighborhoods

Neighborhood	Cluster	Housing price	Poverty rate	Household income	Evolution of housing price over 5 years
Reuilly	0	below	below	above	below
Louvre	2	Above	below	above	below
Opéra	2	below	below	above	above

Positioning relative to the average indicators of the cluster

Conclusions and recommendations (3/3)

- If the investment is relative to starting a business (restaurant, café, clothing store), the type of venues as information is not sufficient, there is a need to dig deeper → average price of the menu, average price for a hotel room, standard, clientele profile...
- Unless, the new business is very innovative or offer a new service, it is important to investigate further about the potential of an area in terms of competition and the concentration of venues.