

Coursera Capstone Project

The Battle of Neighborhoods

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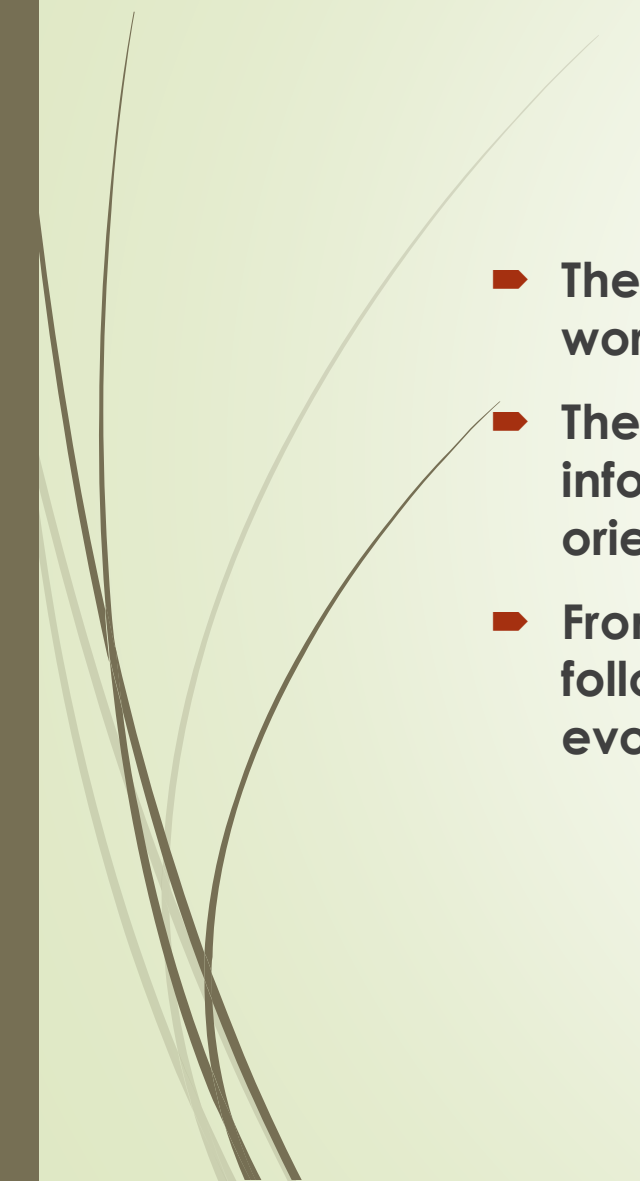


Agenda

- **Introduction & Business Problem**
- **Project main steps**
- **Data Acquisition**
- **Project Results**
- **Conclusion**



Introduction & Business Problem

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- The City of Paris in France, is one of the most famous capital cities in the world, it's a touristic city that present good opportunity for investment.
 - The Objectif is to provide business mans that want to invest in Paris useful information and visualization with recommendations to support them to well orient their business
 - From Another hand I will also help them to find to bay or lent their house following their choice. By providing the house rent or acquisition and their evolution trend in Paris for each area.



Work Main Steps

In this Work the objective is to help the person how wants to build their new business in Paris by providing element (recommendation and visualization) about:

- Neighborhoods house lent Price recommendation (as temporary solution)
- Neighborhoods House Sales Price recommendation (as temporary solution)
- Population distribution and type for business investigation
- Venue distribution bests activities and clustering for their investment analysis
- Existing companies' categories, numbers, activities..., this can help for investment orientation

Data Acquisition

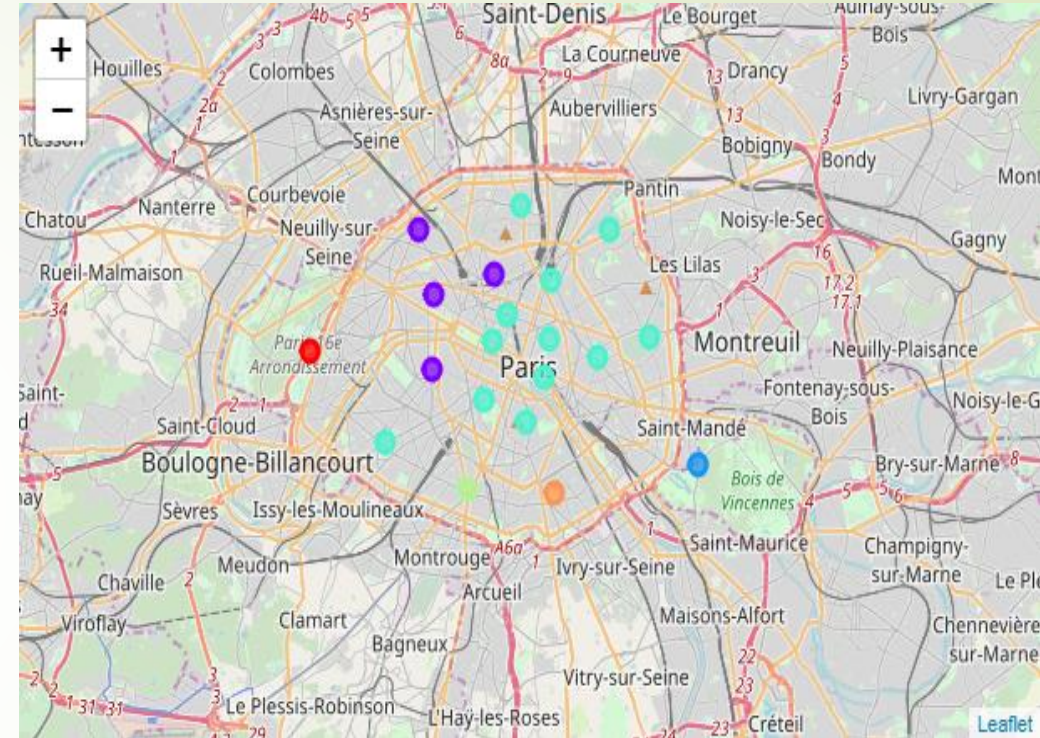
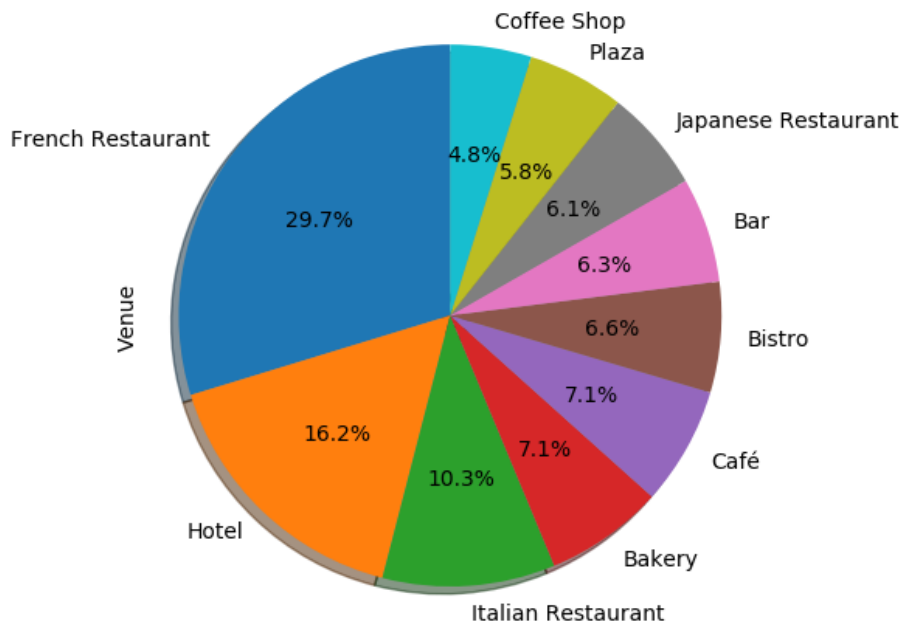
Below are I used for Data collection, a clean up is done to make data ready for analysis:

- Paris Neighbrhoud with coordinates(json sile)
:<https://www.data.gouv.fr/fr/datasets/r/4765fe48-35fd-4536-b029-4727380ce23c>
- Population and géo data: [https://fr.vikidia.org/wiki/Arrondissements de Paris](https://fr.vikidia.org/wiki/Arrondissements_de_Paris)
- House lent :<https://www.linternaute.com/argent/immobilier/1199363-prix-au-m2-l-immobilier-dans-600-villes-de-france/1199365-paris>
- House acquisition: <https://www.journaldunet.com/patrimoine/prix-immobilier/paris/ville-75056>
- Companies data and distribution: <https://opendata.paris.fr> (CSV files: companies_france_export_1_Paris.csv)
- Foursquare API

Project Results (1: Clustering and venues)

The center of Paris presents a homogeneity in venues type and distribution as they are clustered in the same cluster mainly, except border neighborhood.

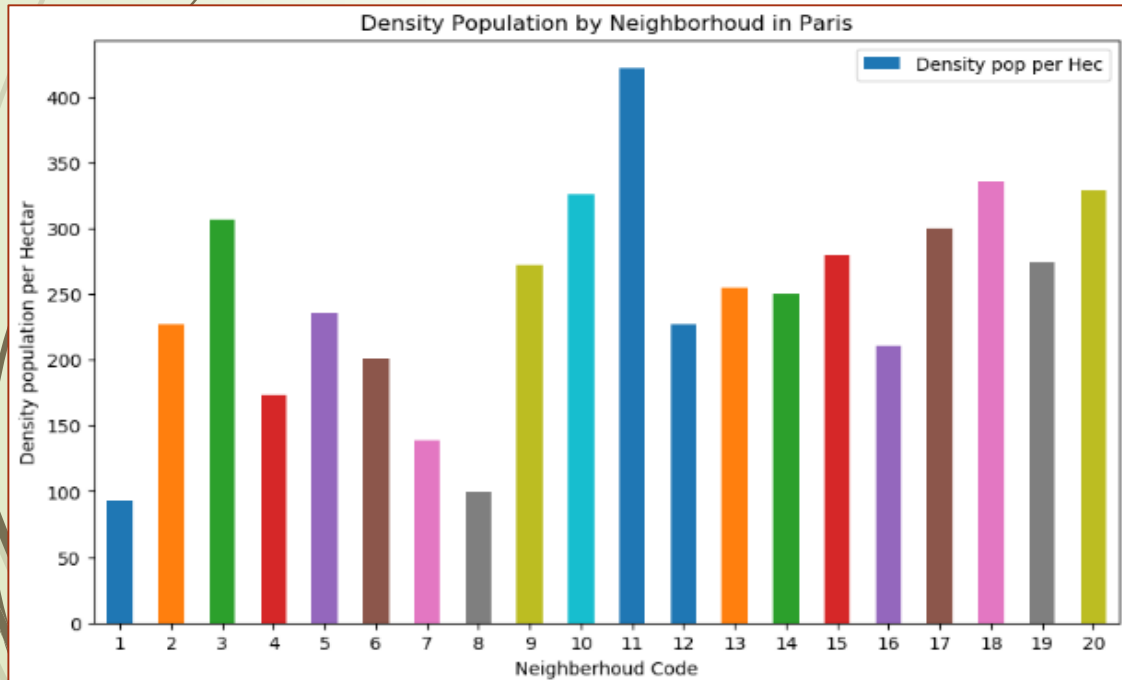
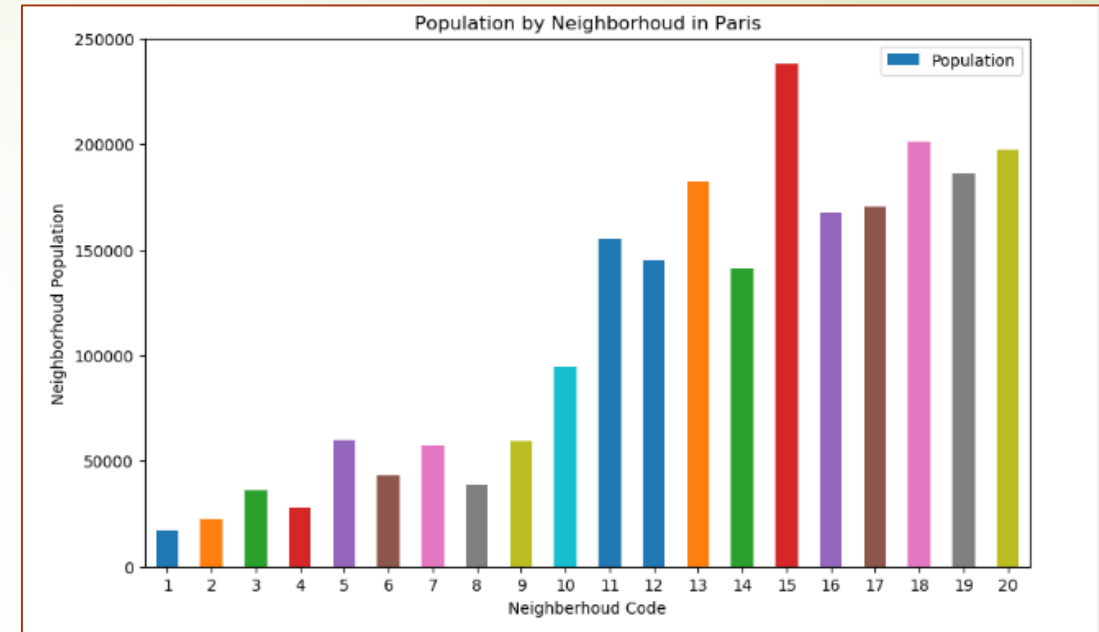
[Distribution of top 10 venues categorie In Paris]



we can see that "French Restaurant" and Hotels are most common in Paris. We can also read it as there is some margin to add new "Coffee shop" or "Plaza" which can a good investment with good ROI

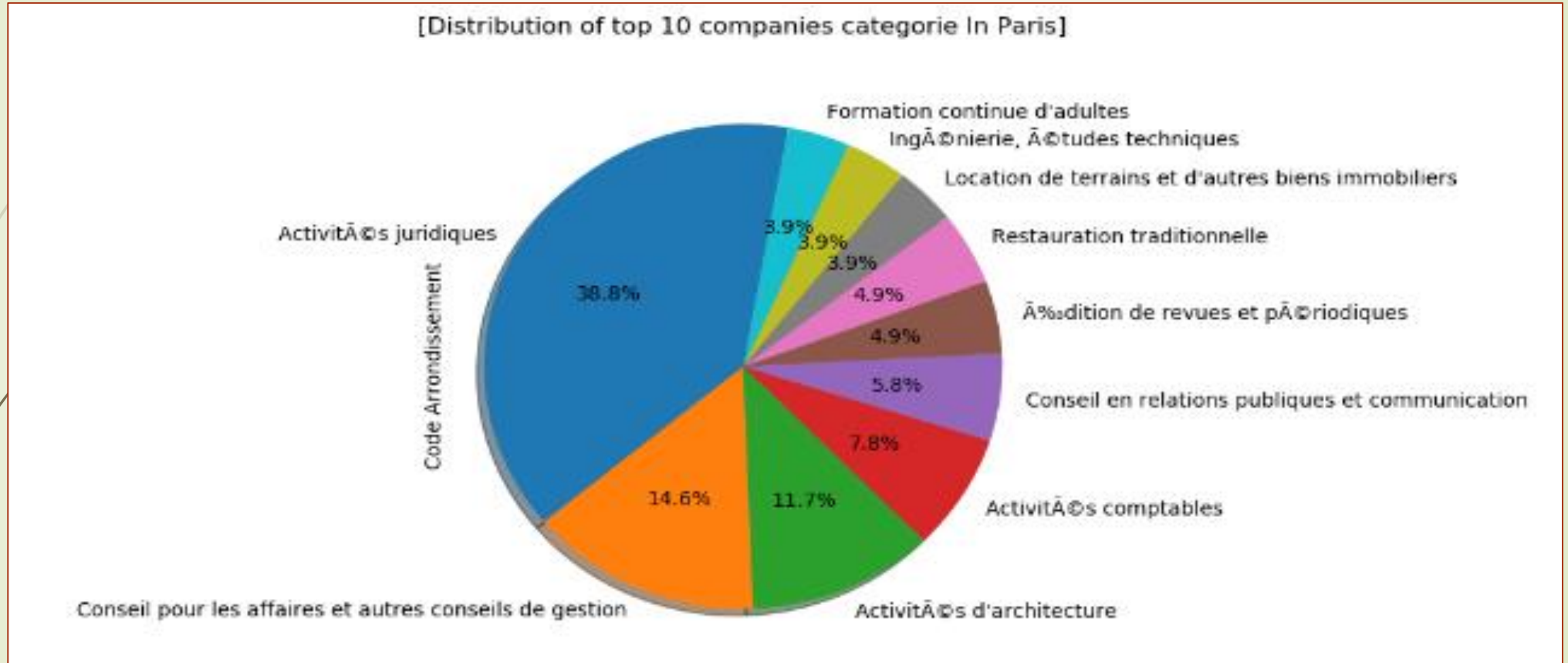
Project Results (2: Insights from Paris Population)

it's clear that Paris "15" & "18" have more population and present a good opportunity for investment but let's combine the population with the Surface with will give more Insight



Paris "11" has high Population per Hectare or Km2 , it depend on type of business , example for restaurant and coffee shop this is highly important to have big density of population rather than the total per neighborhood

Project Results (3: Insights from existing companies)

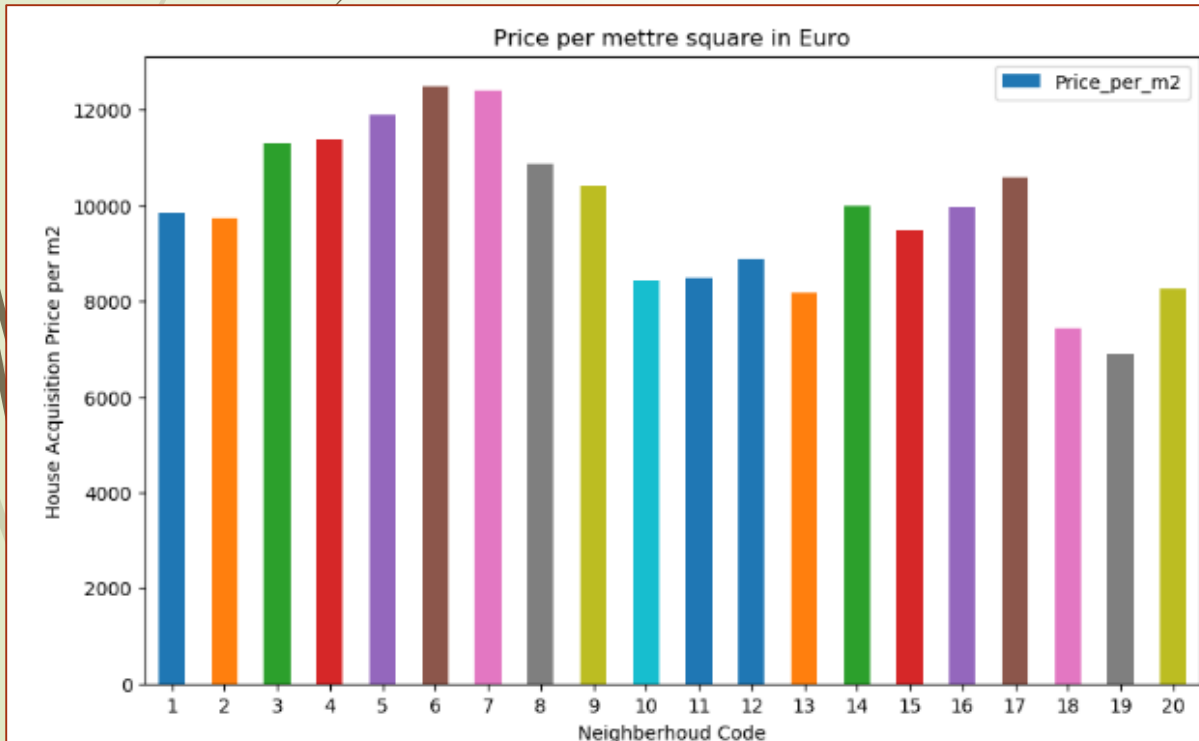
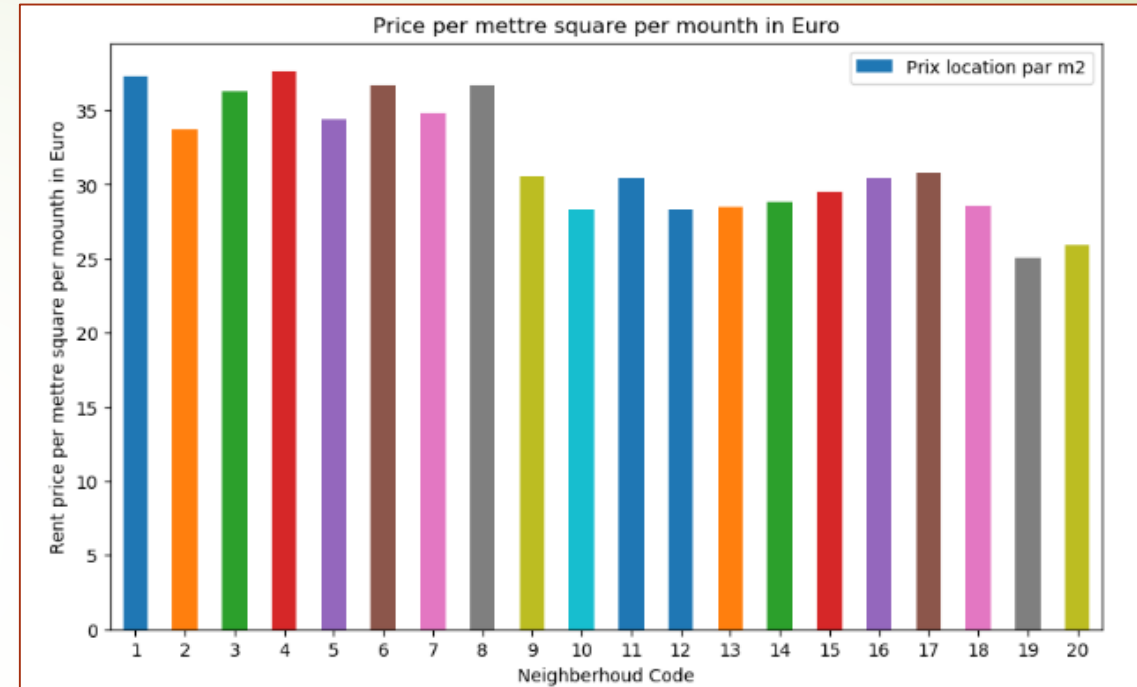


In Paris down cities the most dominant activities are:

- Legal Activities with more than 30%
- Business and management support activities with 11,4%
- And Architects cabinets with around 9% over all activities
- Traditional Restaurants may be a good option for persons with cooking skills

Project Results (4: House Rent and Acquisition)

- 1- From Below graph it's clear that the "Arrondissement 19 & 20" are less expensive than the others.
- 2- The means Rent per m2 per month in Euro is: 31.1 Euro/m2/month



- 1- And as likely for renting, acquisition also is more suitable in " Arrondissement " 18, 19 and 20
- 2- The acquisition mean value in Paris per m2 is: 9843.7 Euro per m2



Conclusion and future directions

After running all above analysis, we can note that:

The center Of Paris presents a homogeneity in neighborhoods venues type and distribution as they cluster in the same cluster, except border's ones. This gives our investor more choices The neighborhood "11" is with high population per hectare, where "15" and "18" are the most populated in total.

Legal Activities and Architect Activities seems to be the most common in Paris down city existing business, but from venues we can see that restaurant and coffee shop are also common. Those activities can be suitable for new project in Paris

In the future once neighborhood and activity is selected by the investor a deep analysis can be done to extract more recommendations and insights



Thank You