

Capstone Project: Battle of the Neighborhoods

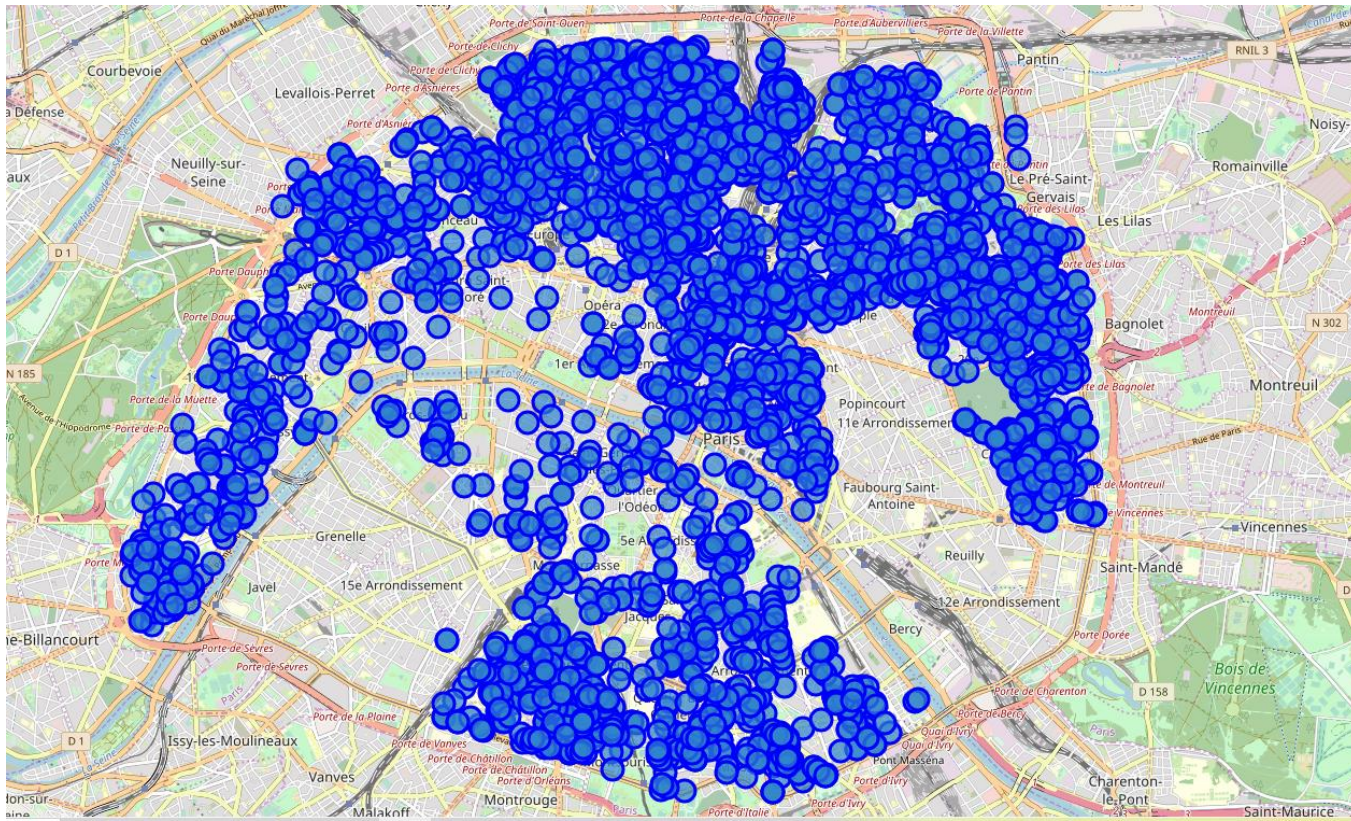
Housing Market in Paris

Introduction

- ▶ Paris is one of the most expensive cities in the world when it comes to real estate.
- ▶ Finding an apartment in Paris is a true mission, and can take up to months of searching, appointments, visits, only to see the apartment go to someone else for most cases.
- ▶ However, with interest rates as low as 1% for a credit line over 25 years, and with real estate picking up value year after year at high percentages, becoming a homeowner has become appealing to most Parisians, as soon as they become active in the work market.

Methodology

Visual of he addresses of our dataset in a Paris map



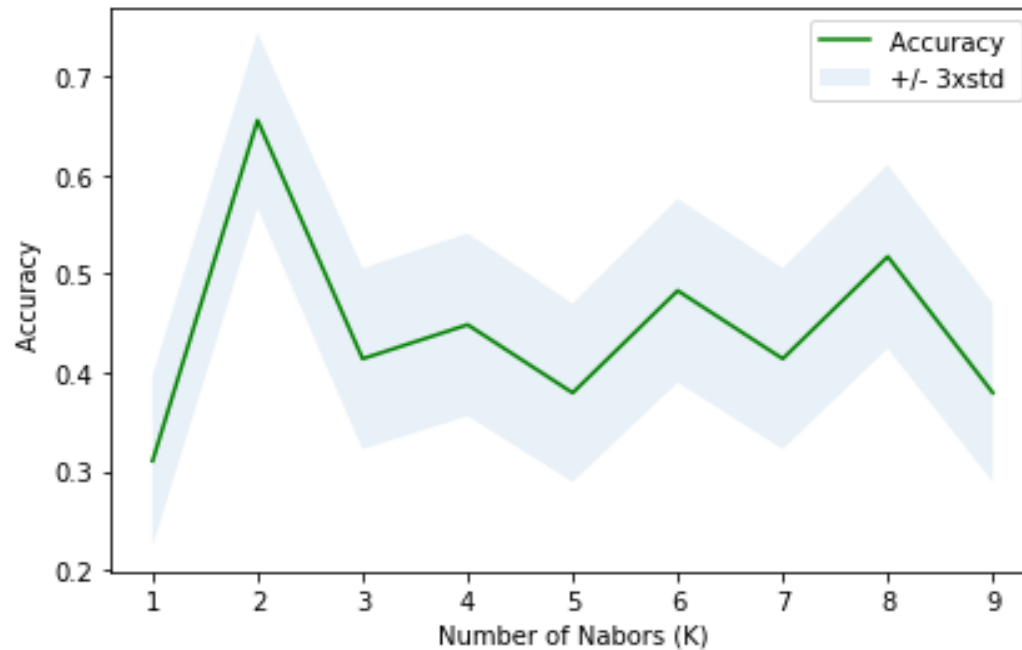
Methodology

Dataframe of our most common venues

| | Address | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue |
|---|---------------------------|-----------------------|--------------------------------|-------------------------------|--------------------------|-----------------------|
| 0 | 1 AV REILLE 75014 | Plaza | Pharmacy | Peruvian Restaurant | Italian Restaurant | Japanese Restaurant |
| 1 | 1 CITE HERMEL 75018 | French Restaurant | Italian Restaurant | Bar | Pizza Place | Gastropub |
| 2 | 100 AV DES TERNES 75017 | French Restaurant | Italian Restaurant | Hotel | Hotel Bar | Indian Restaurant |
| 3 | 105 RUE DIDOT 75014 | Bakery | Thai Restaurant | Modern European Restaurant | Bike Rental / Bike Share | Falafel Restaurant |
| 4 | 11 RUE CHAPPE 75018 | French Restaurant | Italian Restaurant | Bar | Bakery | Candy Store |
| 5 | 11 RUE DE L ARSENAL 75004 | French Restaurant | Southwestern French Restaurant | Vegetarian / Vegan Restaurant | Boat or Ferry | Park |
| 6 | 11 RUE EUGENE JUMIN 75019 | Bar | Music Store | Pub | Supermarket | Steakhouse |
| 7 | 11 RUE SAINT LUC 75018 | Playground | Café | Hotel | Bookstore | Bistro |
| 8 | 11 SQ VITRUVÉ 75020 | Tram Station | Women's Store | Doner Restaurant | Food & Drink Shop | Flower Shop |
| 9 | 118 AV DE FLANDRE 75019 | Pharmacy | Asian Restaurant | Middle Eastern Restaurant | Bus Stop | Supermarket |

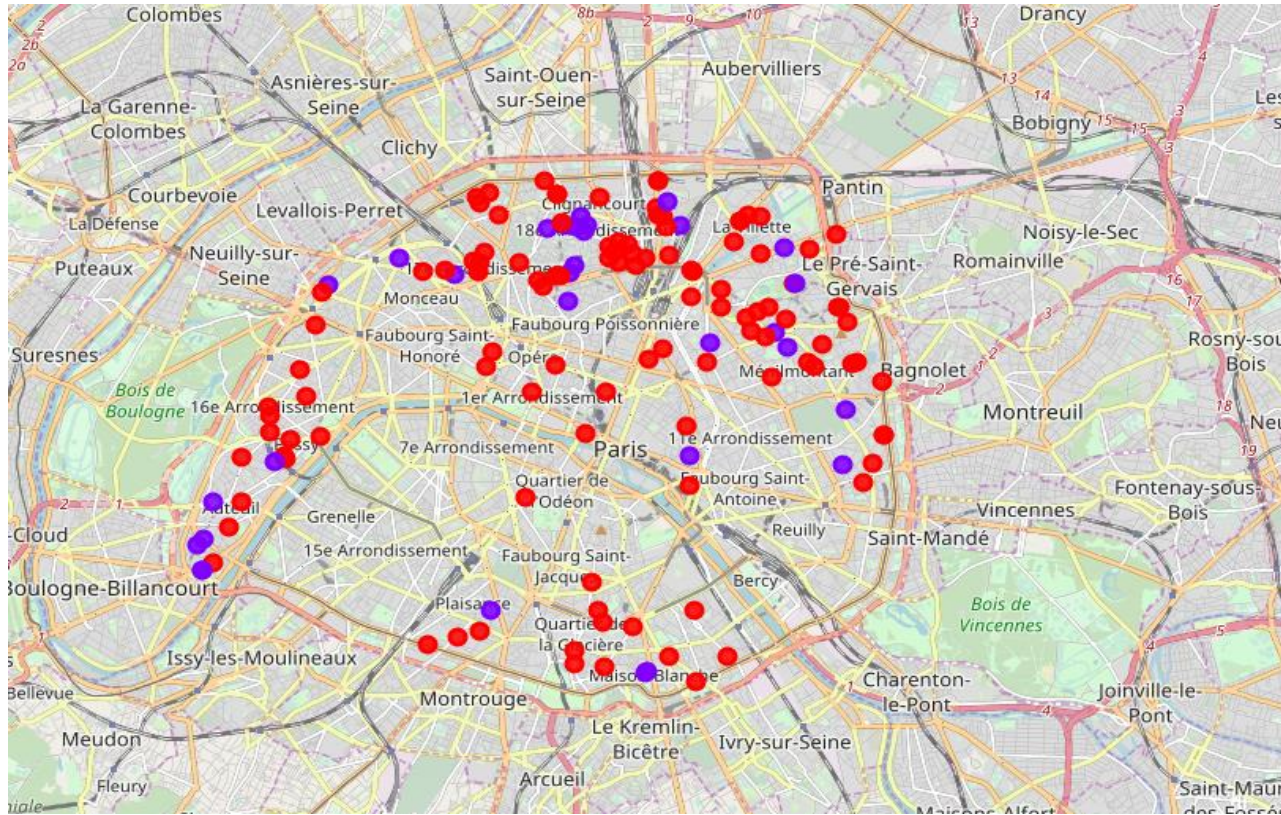
Methodology

Clustering using the k-mean nearest neighbor method



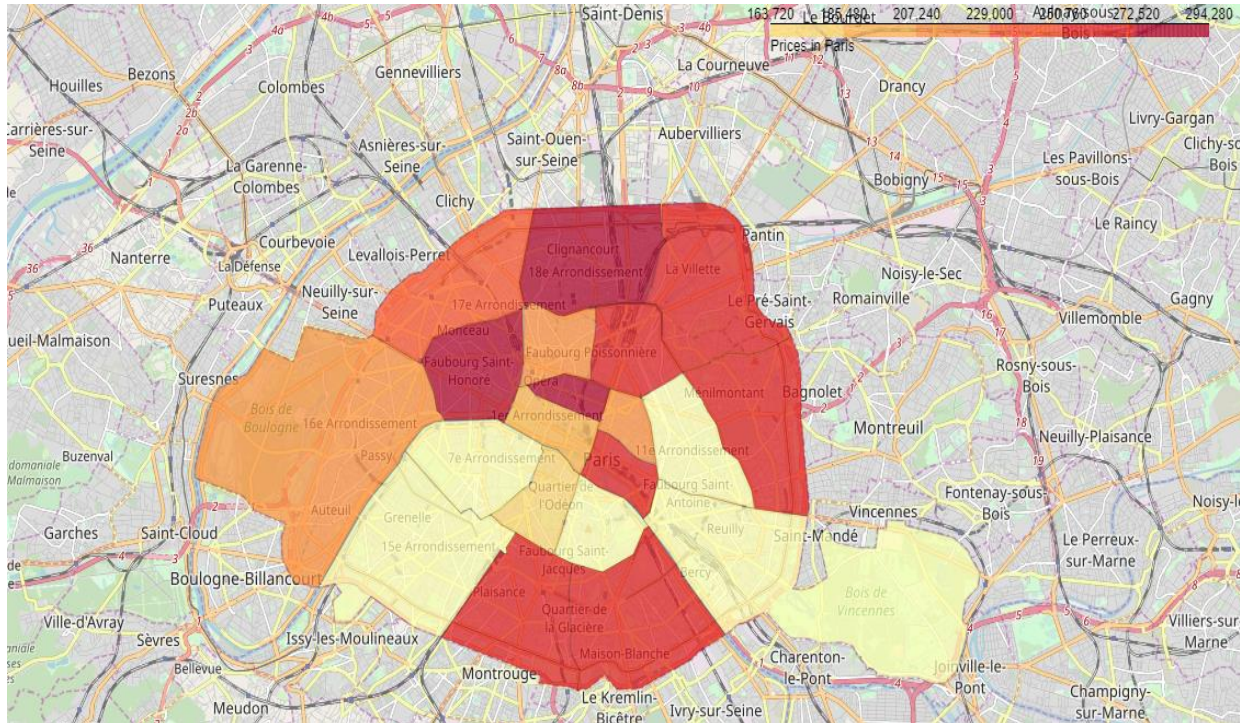
Methodology

Map of our clusters



Methodology

Heat map of apartment prices in Paris



Results

- We notice that the cluster 1 is mostly situated in the northern part of Paris, and more precisely in the 18th, the 19th and 20th districts, but also very present in the 13th and the 16th districts.
- When we look at our most common venues in this cluster, we can clearly see that restaurants are the most dominant venue present in them, which makes the cluster 1 a good fit for people looking for animated streets and an active social life.
- This cluster 0 seems to be more spread than cluster 1, with many restaurants nearby as well.
- But overall, the 2 clusters seem very similar, which leads us to assume that Paris is a homogenous city.