COMPARATIVE ANALYSIS OF TWO EUROPEAN CAPITALS:

PARIS VS ROME

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1. INTRODUCTION

The idea of this project is the comparative analysis of two European cities: Paris and Rome. Both these cities have common characteristics: both are capitals of European countries (respectively France and Italy), both are touristic, both lies by a river. Considering these similarities the aim of the project is to deeper focus in the structure and position of the neighborhood composing the two towns to better understand if their global structure can be considered similar or if there are differences. We would expect that in the downtown of both the towns the neighborhoods are essentially residential and touristic with presence of shops, restaurants and museums. But what the matter for all the neighborhoods surrounding the downtown or the ones in the close countryside? They are mainly residential or industrial and are equally placed in both town?

To answer these questions the data of the two towns have been retrieved and processed in order to cluster the neighborhoods of the two towns in different groups basing on the most common venues of each neighborhood. The clusters of the two towns will be directly compared in order to analyze and detect the similarities and difference between the two towns.

2. DATA

For this study the data of the neighborhoods composing the two towns together with their venues carried out from the Foursquare API data.

- **Paris**:

To analyze Paris it is necessary to retrieve the data of all the Neighborhoods composing “Paris Metropole”. “Paris Metropole” is composed by the borough of the “City of Paris” (department 75) and by the suburb boroughs 92, 93 and 94. The borough of Paris is composed of 20 neighborhoods (arrondissement). The suburb boroughs are composed by different small towns which can be considered as neighborhoods. It is hence necessary to obtain the name of each neighborhood, together with its ID and the number of the Borough of which is part of. For each neighborhood the geographical coordinates are needed.

To obtain the data of the “City of Paris” (department 75), we will scrap the data from the “opendata.paris” webpage. These data are ready to be used, containing already the neighborhoods, their ID and the geographical coordinates. We need to add the data of the neighborhoods of the suburb boroughs. These further information was taken from the list of all the French towns (obtained from “SQL.sh”) containing the Borough number, the ID of the town and their name together to with the geographical coordinates. Only the town of Boroughs 92, 93 and 94 have been retained and their data merged to the ones of “City of Paris” to finally obtain the dataframe containing the data of “Paris Metropole”.

- **Rome**:

The territory of Rome is divided in 155 zones (“zone urbanistiche”). Each of this zone can be considered a neighborhood. More neighborhoods are regrouped in 15 boroughs (Municipi). The list of the neighborhoods and their correspondent boroughs were retrieved scrapping the Wikipedia page “https://it.wikipedia.org/wiki/Zone_urbanistiche_di_Roma”. To obtain the

geographical coordinates of each neighborhoods it has been necessary to scrap the Wikipedia page of each single neighborhood.

- **Venues**:

The venues of each neighborhood of the two towns were retrieved using the Foursquare API. To better analyze the type of the venues and improve the clustering of the neighborhoods, the categories of the venues obtained from Foursquare have been re-collected in the following macro–categories.

Asian Restaurant, European Restaurant, French Restaurant, African Restaurant, Other Food Place, Middle East Restaurant, Latin American Restaurant, American Restaurant, Sport place, School/Education, Shop/Store, Lux Store, Grocery, Hotel, Low cost accommodation, Art/Museum, Airport, Bar, Coffee Shop, Market, Games, Entertainment, Offices, IT, Transports, Park, Services, Business, Medical, Building, Auto/Moto, Farm, Factory.