Introduction

The world is facing today a sanitary crisis without precedents in the modern era, except for the Spanish flu in the early XXth century. When one considers the needs of people amid the current world's context, one of the top priorities is the need for open spaces. After a year living with the COVID-19 pandemy, everyone has felt a bit anxious at some point. Lockdowns, travel and movement restrictions, curfews, lack of social life are just a few reasons why people are eager to get out of their households as soon as they can and breath some fresh air.

According to the UN, today 55% of the world's population live in urban areas. By 2050, humans living in cities will represent around 68%. Hence, how can we manage that urban areas so their residents are able to get some fresh air if cities are growing larger (and this, in the middle of a pandemy)? I believe the solution has a name: parks and gardens. However, the proposed solution brings a new question. How can city or town halls manage the situation so these demanded areas do not become new COVID-19 hotspots?

I moved to France almost two years ago, and I still remember the TV images of crowded parks and gardens of Paris right after a lockdown. Today, the curfew in France begins at 6pm and ends at 6am. That means that by good weather, people crowd in parks and gardens at lunch time.

The aim of this study is to provide the City Hall of Paris and its policy makers a tool of analysis the situation of their public open spaces. It will help to identify those neighbourhoods lacking of green areas regarding their density of population and evaluating their accesibility by public transport (bus and metro). Eventually, it will provide the adequate information to identify the candidates where to build a new park or garden in the lacking neighbourhood.

Data

The data used for this study come from wikipedia and the Paris City Hall.

We will scrap the administrative data from wikipedia: neighbourhood (arrondissement) name and id, surface, population and population density. Please note that data are referred to 2015.

We will obtain the geographical data from the Paris City Hall open source website : geographic coordinates, neighbourhood contour lines, etc...

We will also use Foursquare API to obtain the coordinates of the green areas and to locate the public transport. The public transport stations or stops will be split into two categories, bus and metro.

Short disclaimer

The results of this study refer to data provided by Foursquare API. After several checks with googlemaps and Foursquare, I have noticed that in Paris metropolitan area there are more green spaces than those referenced by Foursquare. The same happens with the bus and metro stations. Please, consider this if you find inconsistencies between the results of the study and the reality. Be also aware that this study represents a very simplified vision of the real problem.