Parks of Madrid

Introduction

As an avid lover of parks and nature in general I prefer to live in areas of a city that contain more green spaces.

Upon moving to Madrid, I realized the city had many parks, but they were not evenly spread throughout.

This project aims to reveal the zip codes with the most parks.

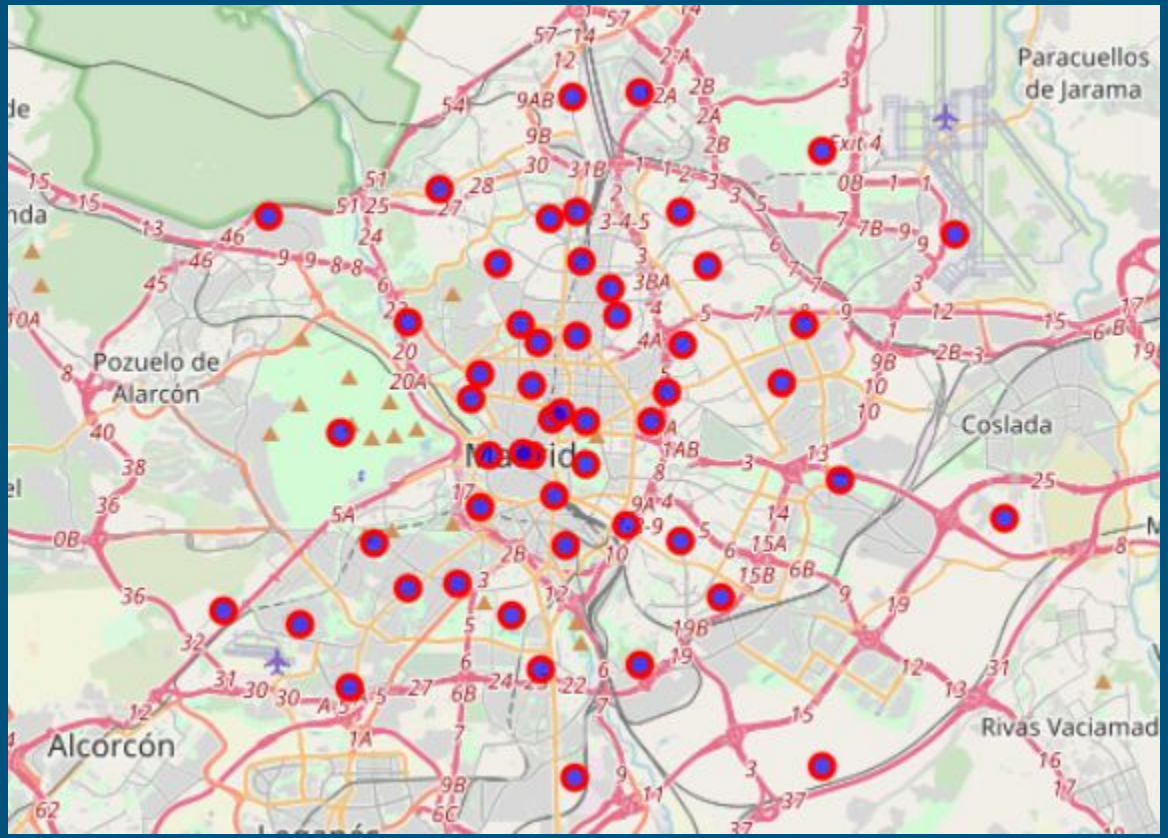
Data

The following data were used in this project:

- Zip codes of Madrid with longitude and latitude

- Foursquare api for park names, zip codes, longitudes and latitudes

Preview of center points of zip codes



Sample of table with park information

	Zip Code	Zip Code Latitude	Zip Code Longitude	Park Name	Park Latitude	Park Longitude	Park Category
0	28001	40.424549	-3.68419	Puerta de Madrid de los Jardines del Buen Retiro	40.420795	-3.681858	Park
1	28001	40.424549	-3.68419	Puerta de O'Donnell de los Jardines del Buen R...	40.421506	-3.680121	Park
2	28002	40.449268	-3.67406	Parque de Berlín	40.450409	-3.675699	Park
3	28002	40.449268	-3.67406	Parque Del Nieremberg	40.448780	-3.673347	Park
4	28002	40.449268	-3.67406	Parque Calle De La Condesa De Santamarca	40.449640	-3.672254	Park
...	...	...	...	...	...	...	...
102	28050	40.500500	-3.66740	Parque San Juan de Ortega / Puente de la Reina	40.501044	-3.670950	Park

Sample of parks per zip code

	Zip Code	Park Name
0	28001	2
1	28002	4
2	28003	3
3	28004	3
4	28005	2
5	28006	2
6	28007	2
7	28008	2
8	28009	10

Methodology

1. All zip codes with coordinates were obtained
2. Foursquare API done to gather park data
3. Tables placed into Pandas for analysis
4. K means ran on data to determine density per zip code from least dense to most dense in terms of park availability
5. Final map output with zip codes color coded to show park density

Results by color

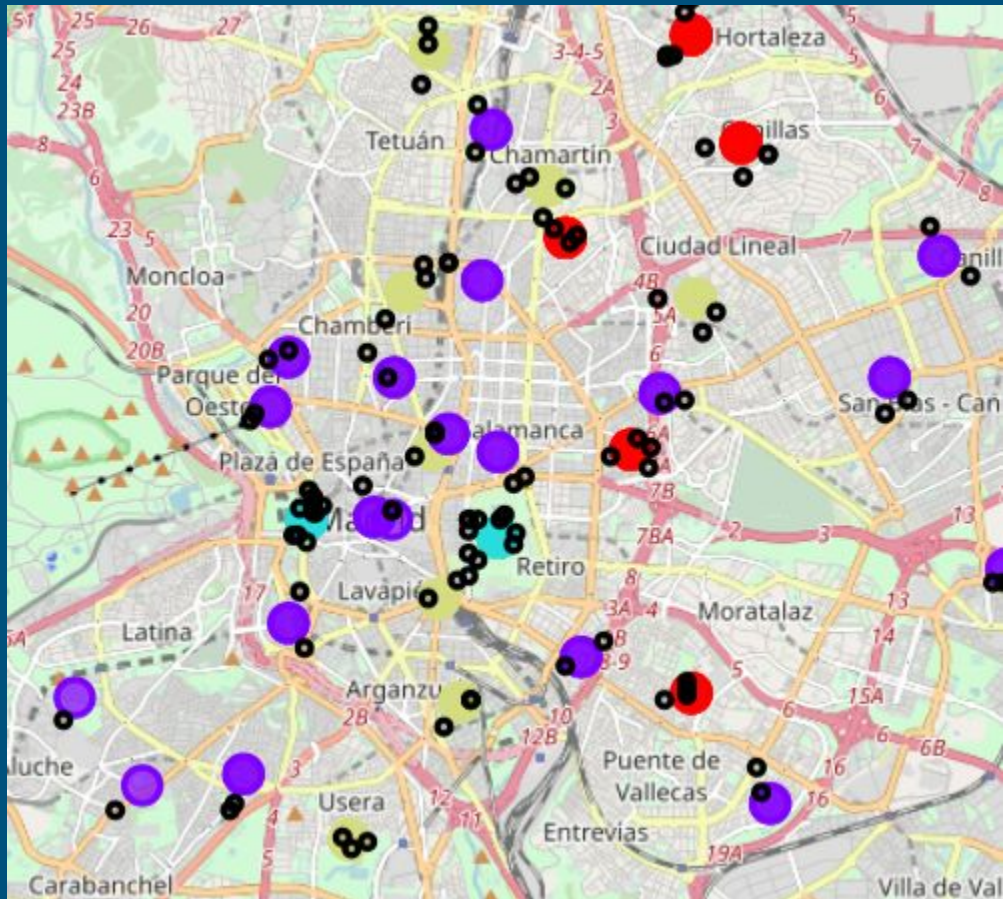
Teal - Most parks

Red

Yellow

Purple - Least parks

Black - Individual parks



Discussion

The map shows that not all zip codes contain the same number of parks

A way to improve this would be to check other location based API’s to see how they compare

The two most dense zip codes are 28013 and 28009

I now know that I would like to live in one of those two zip codes.

Conclusion

Thank you for taking the time to read this today.

This was the very first of many location and map based data science projects I hope to complete.

From here I hope to only get better as I continue this journey of learning.