

A decorative graphic on the left side of the slide. It features a large, light green circle at the top left, a smaller solid green circle at the top center, and four leaf-shaped elements. Two of these leaves are detailed with a close-up photograph of a green leaf's veins, while the other two are solid light green. The leaves are arranged in a stylized, overlapping pattern.

# Determining the “Green” Neighborhoods of London.

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# Business problem:

When people move cities, there are certain criteria they prioritize when searching for a location to live.

- In this case, our client would like to live somewhere where there is easy access to parks or gardens.
- The aim of this project will be to provide a list of locations within London/Greater London in which client will have close access to greenery. We will provide a list and map of these “green” neighborhoods in which the client can use as a baseline to then further refine to satisfy her family’s other living criteria.

# Data Sources:



- London neighborhoods is extracted from Wikipedia page: [https://en.wikipedia.org/wiki/List\\_of\\_areas\\_of\\_London](https://en.wikipedia.org/wiki/List_of_areas_of_London).
- Coordinates of each London neighborhood are extracted from csv file located at: [https://www.doogal.co.uk/london\\_postcodes.php](https://www.doogal.co.uk/london_postcodes.php)
- The number of "green" areas and their type and location in every neighborhood will be obtained using Foursquare API.
- The coordinates of London center will be obtained using Google Maps API geocoding.





# Assumptions:

- “Green areas” = parks, gardens and botanical gardens.
- “Green neighborhood” must contain at least one “green area” within a 200m radius.

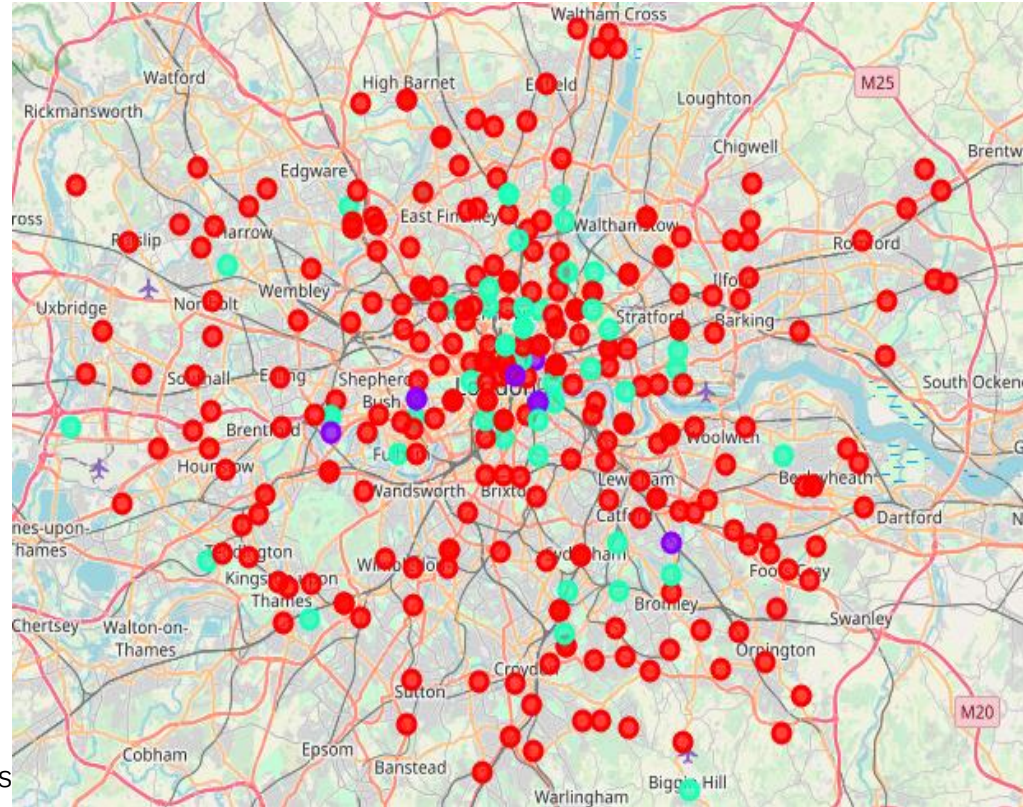
# Analysis:

Machine learning K-means clustering with 3 clusters will be used

- The aim will be to present these clusters on a map in order to display the "green" neighborhoods in relation to the center of London. The stakeholder can then use this map as a baseline to determine which areas he/she would consider to live in.

# Results:

- London has 53 "green neighborhoods".
- Most of London neighborhoods (249) are classed as "non-green" neighborhoods, meaning that they do not have a park or garden within a 200m radius.



- Red markers: 0 "green" areas within a 200m radius
- Green markers: 1 "green" area within a 200m radius
- Blue markers: 2+ "green" areas within a 200m radius



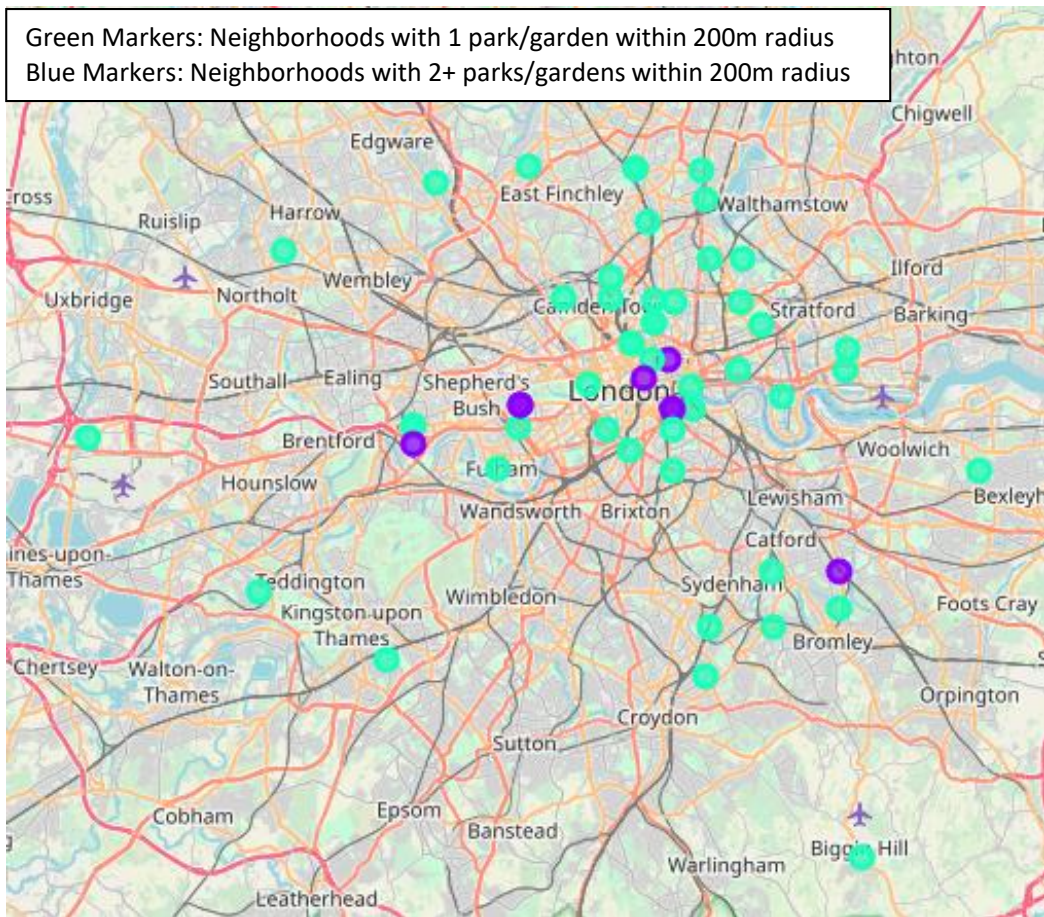
# Table of London's “Green” Neighborhoods:



index	Location	No. Green areas	index	Location	No. Green areas	index	Location	No. Green areas
0	Bankside	2	18	Canonbury	1	36	Pentonville	1
1	Barbican	2	19	Chiswick	1	37	Pimlico	1
2	Kensington	2	20	Church End	1	38	Plaistow	1
3	Newington	2	21	Church End	1	39	Plaistow	1
4	North Kensington	2	22	Colindale	1	40	South Hackney	1
5	Stepney	2	23	Earls Court	1	41	South Harrow	1
6	Temple	3	24	East Wickham	1	42	Southend	1
7	Anerley	1	25	Farringdon	1	43	St Pancras	1
8	Beckenham	1	26	Fulham	1	44	Stroud Green	1
9	Belmont	1	27	Grove Park	1	45	Tottenham	1
10	Belmont	1	28	Grove Park	1	46	Tower Hill	1
11	Belsize Park	1	29	Hampton	1	47	Tufnell Park	1
12	Berrylands	1	30	Harmondsworth	1	48	Turnpike Lane	1
13	Bloomsbury	1	31	Islington	1	49	Walworth	1
14	Camberwell	1	32	Kennington	1	50	West Hackney	1
15	Camden Town	1	33	King's Cross	1	51	Wood Green	1
16	Canary Wharf	1	34	Lea Bridge	1	52	Woodside	1
17	Canning Town	1	35	Mayfair	1			

# Map of London's "Green" Neighborhoods:

Green Markers: Neighborhoods with 1 park/garden within 200m radius  
Blue Markers: Neighborhoods with 2+ parks/gardens within 200m radius



# Conclusion



The purpose of this project was to identify the London neighborhoods which had close access to greenery in order to aid a client narrow down her London neighborhood options by taking into account that she wanted to live close to a park/garden. By calculating the greenery (parks and gardens) density distribution from Foursquare data and then clustering these locations, we were able to create a short list of "green" neighborhoods to which the client could consider moving to.

The final decision on the optimal neighborhood will be made by the stakeholder based on further living criteria she deems important. The information provided to the client (interactive maps and tables) will serve as a solid foundation in which she can begin his/her decision making process.

