

Clearly define a problem or an idea of your choice, where you would need to leverage the Foursquare location data to solve or execute. Remember that data science problems always target an audience and are meant to help a group of stakeholders solve a problem, so make sure that you explicitly describe your audience and why they would care about your problem.

A small tour-guide company that focuses on museums, historical sites, and the cultural and performing arts is looking to expand by opening a new office in a new city somewhere in the US or Western Europe. From a short list of preferred locations, the company has tasked us to determine in which city is the most appropriate to open an office.

Specifically, between four pre-selected cities (New York, Paris, London, and Toronto), the company would like to know which metropolis has **(i)** the highest number of museums, arts centers, and historic sites, **(ii)** the highest concentration of museums, as well as in which neighborhoods they are located, and **(iii)** a comparison of the surrounding neighborhoods (i.e., what venues are around the museums).

Describe the data that you will be using to solve the problem or execute your idea. Remember that you will need to use the Foursquare location data to solve the problem or execute your idea. You can absolutely use other datasets in combination with the Foursquare location data. So make sure that you provide adequate explanation and discussion, with examples, of the data that you will be using, even if it is only Foursquare location data.

To facilitate the client's request, we leverage data from **(a)** Wikipedia, which we scrape to **[i]** find the neighborhood names and addresses for Paris¹, London², and Toronto³, and **[ii]** find the total area⁴ for each city that we used to scale our dataset, **(b)** a local JSON file downloaded from Coursera for the neighborhood names and addresses in New York, and **(c)** FourSquare's API to search for and download venues in each city's neighborhoods.

SOURCES:

Paris¹: https://en.wikipedia.org/wiki/Arrondissements_of_Paris

London²: https://en.wikipedia.org/wiki/List_of_areas_of_London

Toronto³: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

Area⁴: https://en.wikipedia.org/wiki/List_of_largest_cities