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| Capstone Project |
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# Assignment Capstone Project

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| Description of the problem I will use an actual situation I need to define for my next trip to Tokyo, Japan but I think this idea may be converted into an application where anyone may indicate a target city and what activity is desired and application may return options that may be refined time a time based on rankings people gave to them and location, so, people may decide to be near a certain area instead or other, this case only applies as a proof of concept. The argumentation of the case is as follows:  I am planning to visit Tokyo late 2021 or early 2022, one of my main expectations regarding this trip is to define an accommodation in Tokyo Metropolitan area with a plenty options of food variety and quality keep an eye in my favorites, sushi bars (this is my case but this will be other by choice), my goal is to have full access by walk from the hotels I plan to stay to the best restaurants near around, I mean, I need to define one neighborhood to stay most of the time, based on my research two boroughs are the most interesting to get a good and affordable hotel, attractions and of course, food, those are Asakusa and Shinjuku, the first one is well known traditional site and the second one is most known by nightlife and shopping, in any case, I need to choose just one neighborhood to stay, therefore, neighborhood fight will be between those sites.  Well, the aim of this project is to identify which neighborhood is better in terms of high-quality sushi bars restaurants locations near the hotels and based on the previous customer’s rankings we may check it out in Foursquare but it would be in any other site with that information, in order to that, I will define some criteria to be applicable to my project:   * I will use actual address of two hotels, one in Asakusa, Taito City and the other one in Shinjuku, Shinjuku City, both are in the Tokyo Metropolitan area. * The addresses of those hotels are as follows:   + Richmond Hotel Premier Asakusa International, 2 Chome-6-7 Asakusa, Taito City, Tokyo 111-0032, Japan   + APA Hotel Shinjuku Gyoemmae, 2 Chome-2-8 Shinjuku, Shinjuku City, Tokyo 160-0022, Japan * The area to look around those sites for sushi bars restaurants will be around 600 meters from the hotel’s addresses. * Only ratings more than 7.0 indicated in Foursquare will be considered for the analysis between neighborhoods. * The criteria to declare a winner will be the neighborhood or cluster of restaurants with more restaurants with the ratings desired.   A description of the data and how it will be used to solve the problem  I will use the following data:   * Using the actual addresses of the hotels, I will get the coordinates (latitude and longitudes) of those sites using geopy library. * I will be able to show those sites in maps to describe the areas and surroundings using Folium library. * Using Foursquare API, I will be able to get information about restaurants with the criteria indicated (sushi bars, proximity to hotels, ranking etc.) and convert that information into data frame format. * I will convert all data downloaded by sites, locations etc. into a data frame format and proceed with the cleanup process, basically, I need to build one data frame with the following information:   + Name of restaurant   + Location no more far that 600 meters from hotels   + Ranking >=7.0 * I will be able to draw both neighborhoods and get a visual approach which cluster is better than the other in terms of quantity of restaurants that comply the requirements.   In case I need further information or introduce new requirements or caveats during the analysis and coding process, those will be indicated in the Jupyter notebook. |
| Let’s go for it and learn in the process! |
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