

Capstone Project

Business Problem

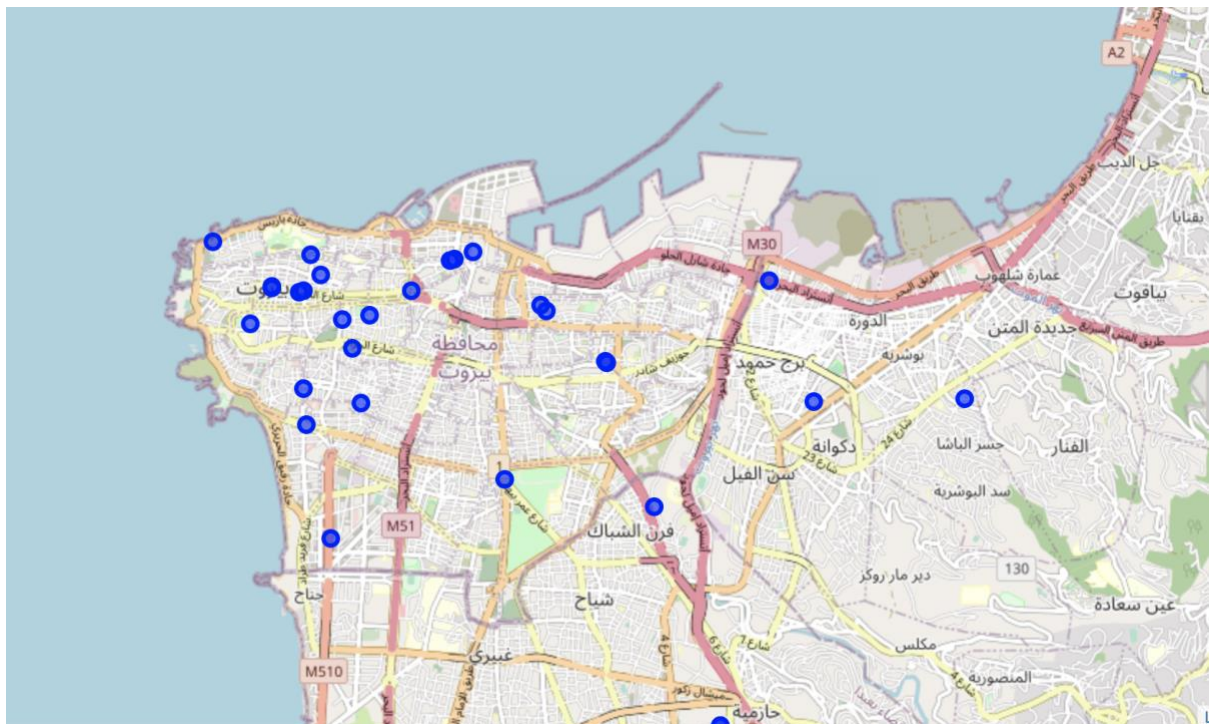
Fitness is a growing trend, especially across the Middle East. The combination of having to constantly look good on social media and the healthy revolution has led to a significant increase in the number of those joining gyms, many of whom would not traditionally do so. In addition as COVID-19 linked lockdowns begin to ease, people are likely to flock to gyms and fitness centres to shed the pounds gained while stuck at home. Location is central to which gym people choose, nobody wants a half-hour commute for a workout. As of such I will leverage Foursquare API data to find the areas in Beirut, the capital of Lebanon, that are most underserved with fitness centres and use that as a proxy for where the optimal location for a new gym would be.

Data

Complete data on Lebanon is scarce; few people collect or update it. As of such my ability to work with the Foursquare API is limited as many locations do not have a category or are missing some other entry. That said, the most complete list I could find was that of gyms and fitness centres and hence that is what data I will use.

Process

To figure out which areas in Beirut are most underserved I'll first plot all fitness centres on a map and use such to qualitatively figure out which areas would be best served by a new gym.



Results

As is clear in the above dataframe, Beirut has approximately 25 fitness centres. There is a clear correlation between the number of gyms in and the level of poverty in the said area. Unfortunately data for poverty levels by area is unavailable, but the areas with the least number of gyms, Chiyah, Ghobeiry, Sin el Fil, and Corniche el Mazraa clearly have very few gyms.

Discussion

There is the obvious issue that many of these areas are poorly served by Foursquare data collectors. It is likely that gyms do exist in these regions, but are simply not listed. However, if we use listing on Foursquare as a proxy for the quality of the gym, the conclusion can be made that the areas listed above are the most underserved of quality gyms.

It can thus be concluded that if a high-quality gym was set up in one of those areas with a business model that properly targets the residents of that area, it would be a success.

Conclusion

In conclusion, I used the Foursquare API to see which areas of Beirut have the least number of fitness centres and hence recommend potential locations for a new gym.