

BATTLE OF DISTRICTS - ISTANBUL

1) INTRODUCTION

The unfortunate event, the Covid - 19 pandemic, that our world has been experiencing for the last two months had many people locked down at their homes. This disastrous happening essentially prevents people from going to their gyms to relieve the accumulated stress and burn excess calories to get into shape.

Considering the negative atmosphere that Covid – 19 brought upon us and the fact that most people can only do some light activities at their homes, individuals dream about getting back to their gyms as soon as possible. Even the folks with no gym history yearn for registering to a gym to neutralize the effect of stress-eating which they have been doing since the very start of this pandemic.

So, as a young entrepreneur living in Istanbul, who has only enough money for the equipments and the rent of a couple of months, I would like to have an aimed-shot rather than a random one. That is, I have to find the best district to open up my gym by considering various factors which may affect the success of my place one way or another.

2) DATA

Data forms the essence of this project as Istanbul is one of the biggest cities in the world with history that dates back to the first ages. That is to say, a person living in this city can't grasp all of its details just by herself / himself. Therefore, in this project, I make use of 3 different data sources to carry out a detailed district analysis:

Wikipedia: To get the district names of Istanbul properly as there are nearly 40 districts.

Districts	
0	Adalar
1	Arnavutköy
2	Ataşehir
3	Avcılar
4	Bağcılar
5	Bahçelievler
6	Bakırköy
7	Beşiktaş

Fig1.1: District names obtained and put into Python's DataFrame format

Open Street Map: To get the exact coordinates of each district to pass them to Foursquare API.

	Districts	Latitude	Longitude
0	Adalar	40.87625945	29.091027262109563
1	Arnavutköy	41.184182	28.7407289
2	Ataşehir	40.9847487	29.1067199
3	Avcılar	40.9801353	28.7175465
4	Bağcılar	41.0338992	28.8578982
5	Bahçelievler	41.0002895	28.8637451
6	Bakırköy	40.9835414	28.8679735
7	Başakşehir	41.0976935	28.8061626
8	Bayrampaşa	41.0357375	28.9122605
9	Beşiktaş	41.0428465	29.0075283
10	Beykoz	41.1239355	29.1083151

Fig1.2: Appended Latitudes & Longitudes to districts with the help of Open Street Map DB

Foursquare: Foursquare database composes the main source of information for this project. Within this database, we look for places such as universities, high schools, shopping malls etc. which may have sizable effects on our success ratio.

	District	Latitude	Longitude	Universities	High Schools	Supplement Shops	Shopping Malls	Sporting Goods Shops	History Museums	Fitness Centers
0	Adalar	40.87625945	29.091027262109563	6.0	13.0	1.0	7.0	1.0	7.0	13.0
1	Arnavutköy	41.184182	28.7407289	4.0	27.0	1.0	47.0	2.0	0.0	29.0
2	Ataşehir	40.9847487	29.1067199	49.0	50.0	20.0	50.0	48.0	21.0	50.0
3	Avcılar	40.9801353	28.7175465	50.0	50.0	10.0	50.0	50.0	11.0	50.0
4	Bağcılar	41.0338992	28.8578982	47.0	50.0	25.0	50.0	49.0	32.0	50.0
5	Bahçelievler	41.0002895	28.8637451	46.0	50.0	22.0	50.0	49.0	30.0	50.0
6	Bakırköy	40.9835414	28.8679735	47.0	50.0	17.0	50.0	49.0	17.0	50.0
7	Başakşehir	41.0976935	28.8061626	44.0	50.0	3.0	50.0	43.0	10.0	50.0
8	Bayrampaşa	41.0357375	28.9122605	50.0	50.0	21.0	50.0	49.0	49.0	50.0
9	Beşiktaş	41.0428465	29.0075283	50.0	50.0	15.0	50.0	49.0	50.0	50.0
10	Beykoz	41.1239355	29.1083151	46.0	47.0	2.0	47.0	14.0	7.0	48.0
11	Beylikdüzü	41.0010788	28.642054	49.0	50.0	24.0	50.0	49.0	8.0	50.0
12	Beyoğlu	41.0284233	28.9736808	50.0	50.0	15.0	50.0	49.0	50.0	50.0

Fig1.3: Venue details obtained from Foursquare DB added to the Istanbul Districts DataFrame