

INVESTMENT HOME

For the AirBnB Rental

Introduction

- Create a company that provides house and hotel-grade service with housekeeping in Istanbul
- Istanbul is a historical and popular place to visit.
- For that reason, we are wondering which locations are suitable.

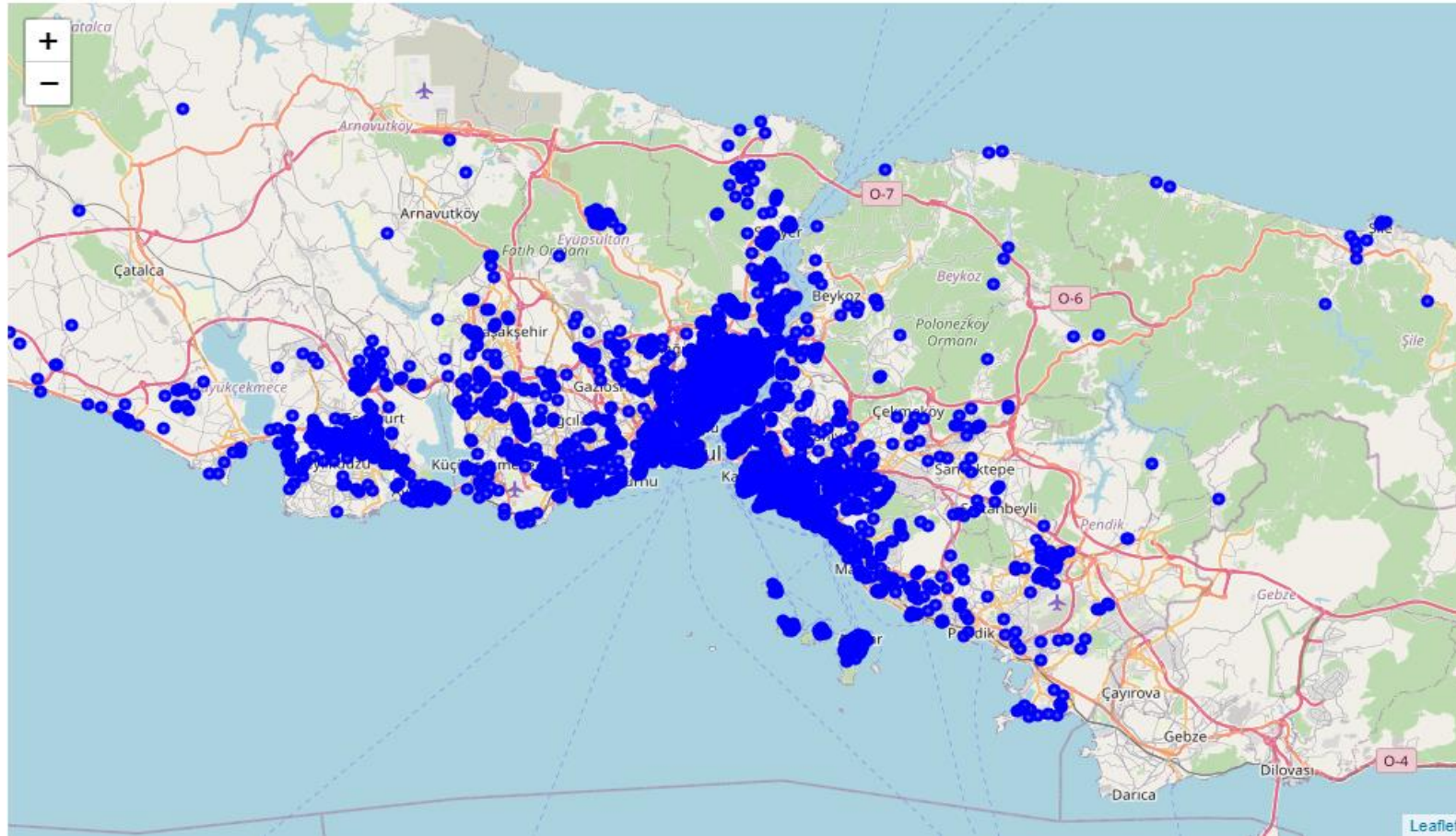
Data

- AirBnB Istanbul Dataset
- Endeksa House Indexing Website
- Foursquare API

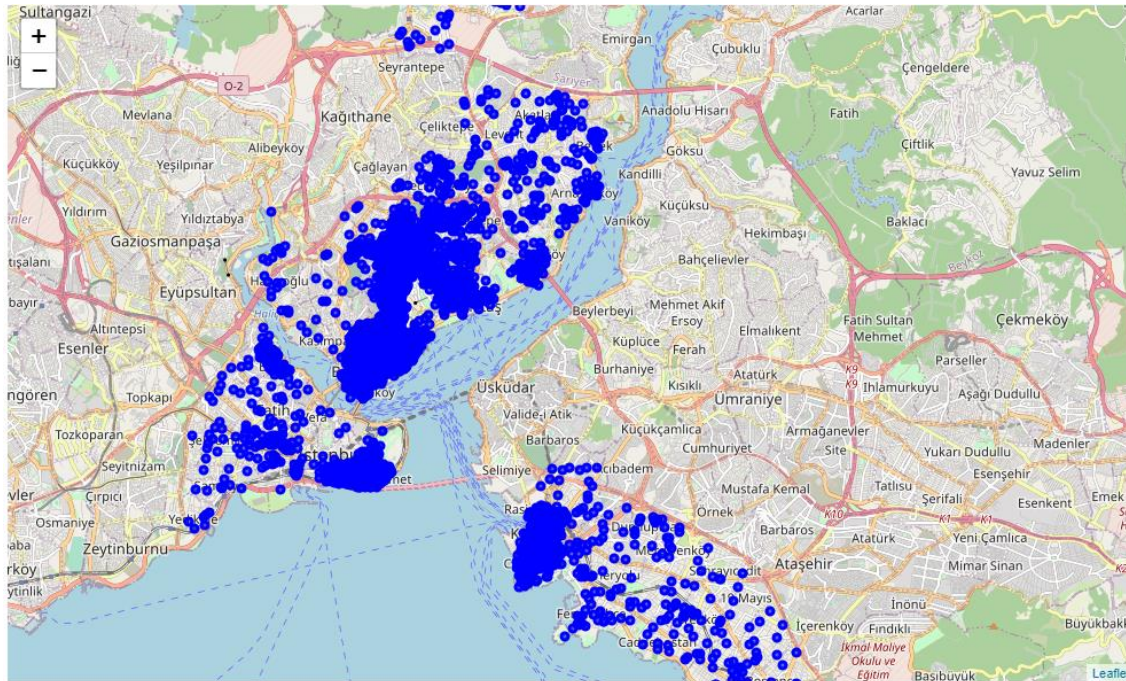
Methodology

- Show Locations on Map
- Find Popular Plaes in Neighbourhood Basis
- Find Centroid of the Dataset Using K-Mean Clustering
- Find Popular Centroids according to Hotel Numbers Around
- Determine AirBnB Prices According to Frequency Distribution

AirBnB Rentals Over Istanbul

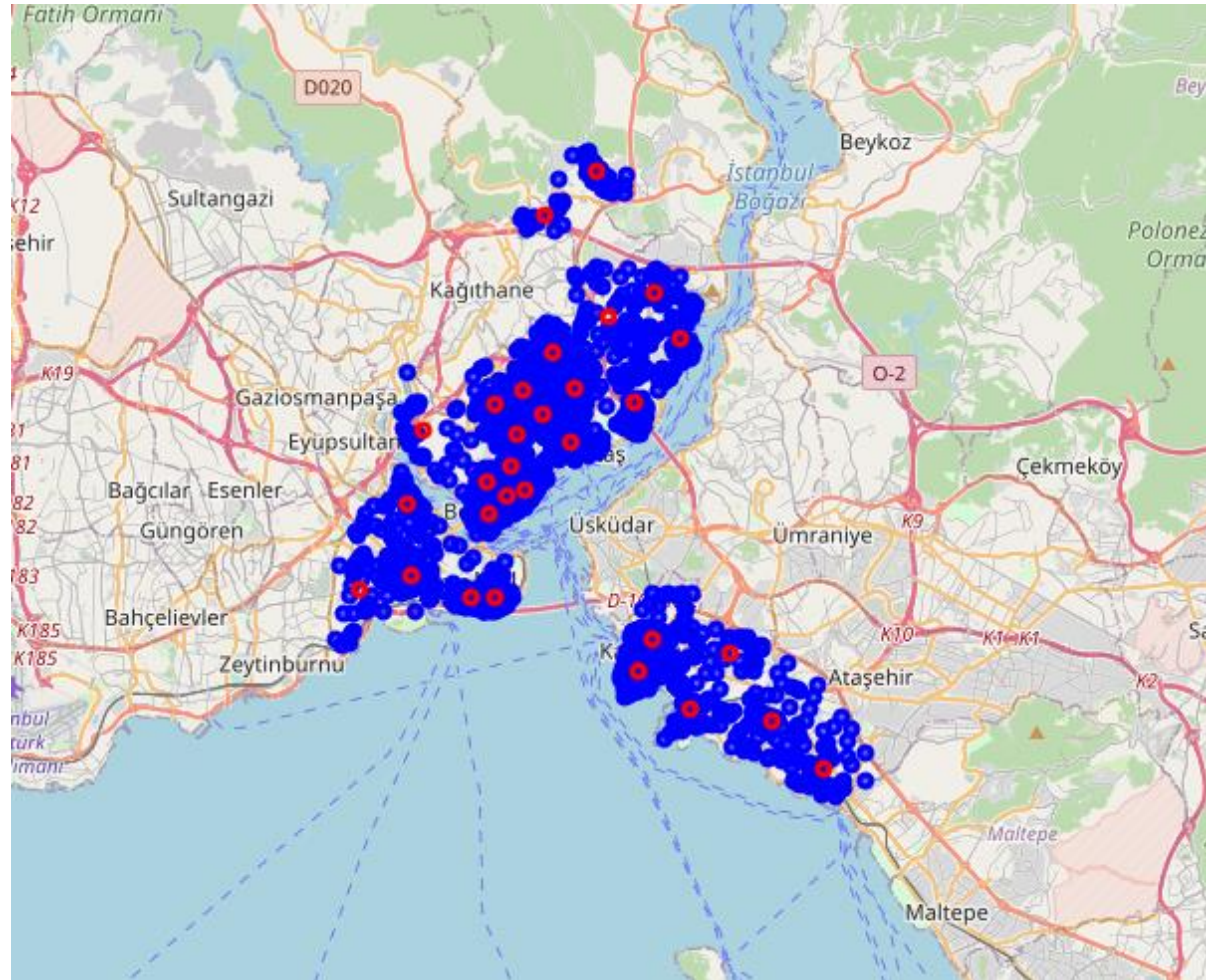


Limited Rentals in Neighborhood Basis

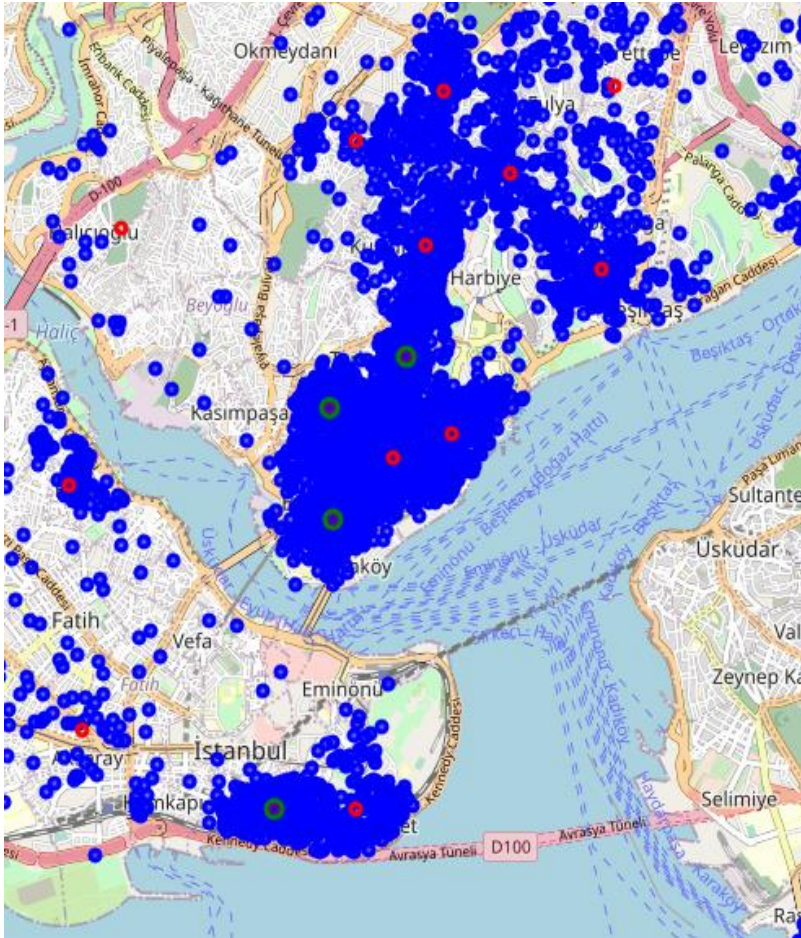


- Places that have more than 500 AirBnB
 - Beyoğlu
 - Şişli
 - Fatih
 - Kadıköy
 - Beşiktaş

K-Mean Centroids (30 Clusters)



Popular Centroids according to Hotel Numbers Around



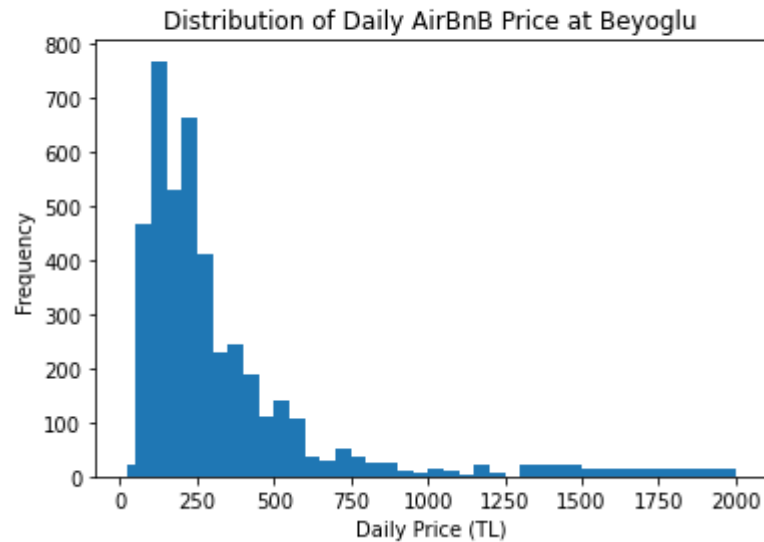
- More than 10 Hotels in 100m Radius

CentroidNumber	Latitude	Longitude	HotelNumber
0.0	41.005063	28.968760	19.0
1.0	41.026964	28.974881	18.0
4.0	41.039260	28.982542	50.0
26.0	41.035337	28.974617	19.0

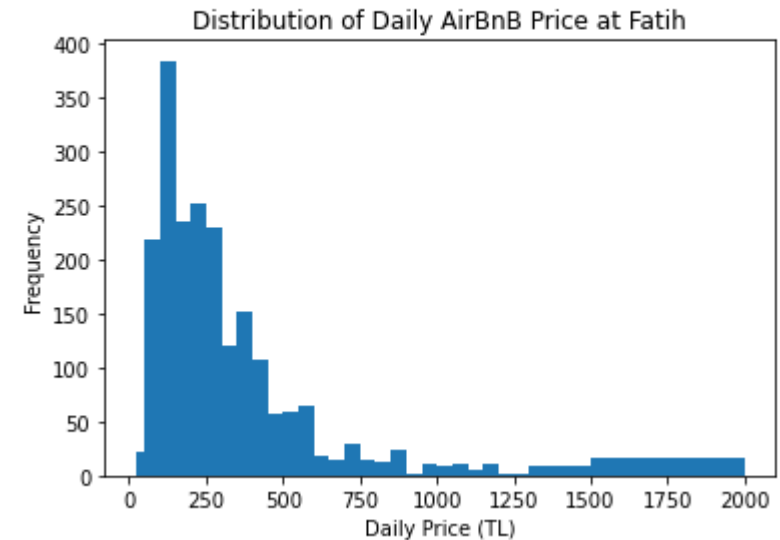
- The places are in the Fatih and Beyoğlu.

Determine AirBnB Prices According to Frequency Distribution

Daily Mean Price at Beyoglu is 373.1771495877503
Daily Median Price at Beyoglu is 227.0



Daily Mean Price at Fatih is 498.9310344827586
Daily Median Price at Fatih is 240.0



- Daily Rental for Beyoglu is selected 450 TL per day and Daily Rental for Fatih is Selected 500 TL per day.
- Occupancy rate at montly basis is assumed %45 percent of the month.
- Monthly airBnB rental prices of Beyoglu and Fatih is 6075.0 TL and 6750.0 TL per month, respectively.

Results

	priceHouse	priceMonthlyRental	priceMonthlyAirBnB
Location			
Kumkapi	513840	1312	6750.0
Tarlabasi	335430	1555	6075.0
Tepebasi	420495	1620	6075.0
Taksim	1495000	3300	6075.0

Discussion – Loan Based Investment

- Interest : %1.35
- Period: 120 Month

Future Values

```
Location
Kumkapi      2.568492e+06
Tarlabasi    1.676688e+06
Tepebasi     2.101896e+06
Taksim       7.472941e+06
Name: priceHouse, dtype: float64
```

Monthly Payments

```
Location
Kumkapi      8671.647306
Tarlabasi    5660.771166
Tepebasi     7096.341923
Taksim       25229.862840
Name: priceHouse, dtype: float64
```

Discussion – Profit

- The only profitable place is Tarlabasi with %6.8 in monthly basis.
- Turkey's inflation rate is %12 according to TUIK data. We can calculate net present value of the profit from house at Tarlabasi. Net Present value of Tarlabasi investment is 29160 TL.

Conclusion

- We can profit %8.6 if we invest house at Tarlabasi.
- Payback period of the investment is 102 months.
- For Other Places we make loss. For Kumkapı, Tepebaşı and Taksim, we make loss %28.4, %16.8 and %315 in monthly basis.
- This investment is not a good investment.