Map Visualization with Folium

Airbnb Data

In [64]:
```
#Data processing packages
import pandas as pd
import numpy as np
pd.set_option('display.max_colwidth', 300)

#Visualization packages
import matplotlib.pyplot as plt
import seaborn as sns

#NLP packages
from textblob import TextBlob

import warnings
warnings.filterwarnings("ignore")
import folium
from folium import plugins
```

In [ ]:
```
```

In [65]:
```
airbnb_data=pd.read_csv("data/airbnbIstanbul.csv")
airbnb_data.head()
```

Out[65]:

	id	name	host_id	host_name	neighbourhood_group	neighbourhood	latitude	longi
0	4826	The Place	6603	Kaan	NaN	Uskudar	41.05650	29.0
1	20815	The Bosphorus from The Comfy Hill	78838	Gülder	NaN	Besiktas	41.06984	29.0
2	25436	House for vacation rental furnutare	105823	Yesim	NaN	Besiktas	41.07731	29.0
3	27271	LOVELY APT. IN PERFECT LOCATION	117026	Mutlu	NaN	Beyoglu	41.03220	28.9
4	28277	Duplex Apartment with Terrace	121607	Alen	NaN	Sisli	41.04471	28.9

In [66]:
```
airbnb_data.isnull().sum().to_frame() #let's look at missing values
```

Out[66]:

	0

	0
id	0
name	91
host_id	0
host_name	7
neighbourhood_group	16251
neighbourhood	0
latitude	0
longitude	0
room_type	0
price	0
minimum_nights	0
number_of_reviews	0
last_review	8484
reviews_per_month	8484
calculated_host_listings_count	0
availability_365	0

MarkerCluster

In [67]:
```
m = folium.Map([42 ,29], zoom_start=5,width="%100",height="%100")
locations = list(zip(airbnb_data.latitude, airbnb_data.longitude))
cluster = plugins.MarkerCluster(locations=locations,
                   popups=airbnb_data["neighbourhood"].tolist())
m.add_child(cluster)
m
```

Out[67]:

CircleMarker

In [68]:
```
m = folium.Map(location=[41,29],width="%100",height="%100")
for i in range(len(locations)):
    folium.CircleMarker(location=locations[i],radius=1).add_to(m)
m
```

Out[68]:

In [ ]:
```
```

In [69]:
```
airbnb=airbnb_data[["latitude","longitude","price"]]
min_price=airbnb_data["price"].min()
max_price=airbnb_data["price"].max()
airbnb["price"].describe().to_frame()
```

Out[69]:

	price
count	16251.000000
mean	354.723894
std	1428.938340
min	0.000000
25%	105.000000
50%	190.000000
75%	327.000000
max	59561.000000

StepColormap

In [70]:
```
import branca.colormap as cm
m = folium.Map(location=[41,29],width="%100",height="%100")
colormap = cm.StepColormap(colors=['green','yellow','orange','red'] ,#renkler
                           index=[min_price,105,190,327,max_price], #eşik değerl
                           vmin= min_price,
                           vmax=max_price)
for loc, p in zip(zip(airbnb["latitude"],airbnb["longitude"]),airbnb["price"]):
      folium.Circle(
      location=loc,
      radius=2, #yarıçap
      fill=True,
      color=colormap(p)
).add_to(m)
m
```

Out[70]:

In [71]:
```
airbnb.sample(3)
```

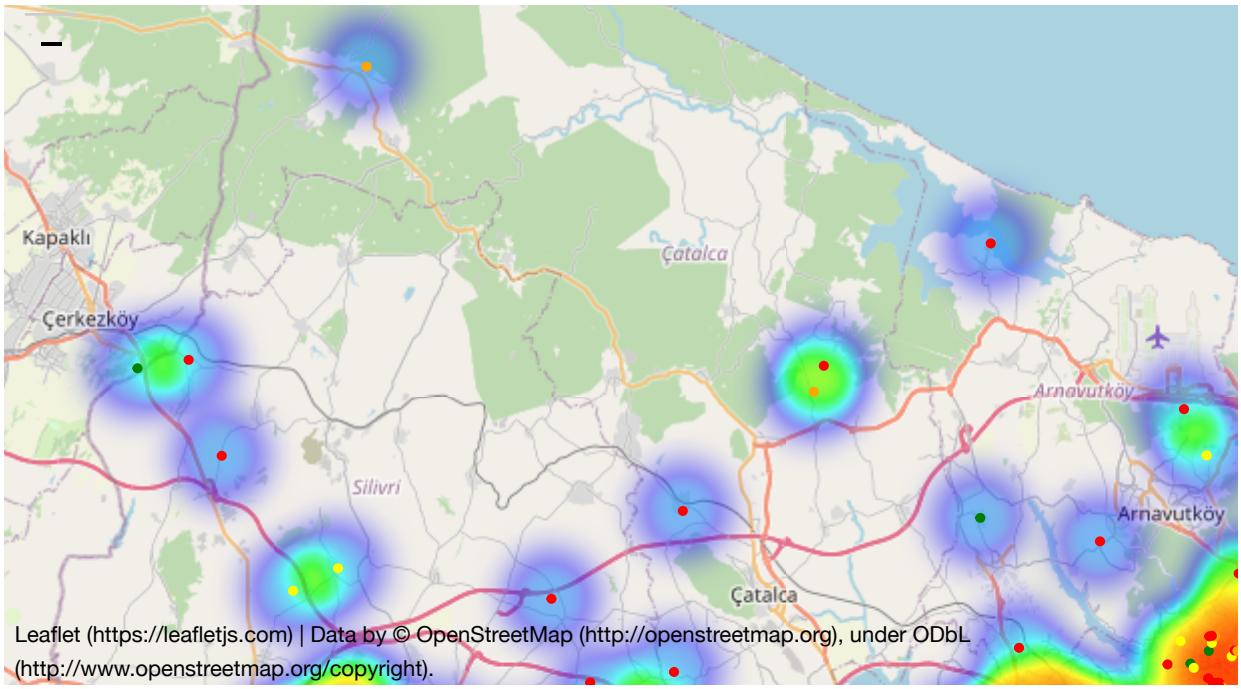
Out[71]:

	latitude	longitude	price
4043	41.01205	29.01386	127
12861	40.98813	29.07800	227
9161	41.03368	28.98390	100

HeatMap

In [72]:
```
heat_data = airbnb.groupby(["latitude","longitude"])['price'].mean().reset_index
folium.plugins.HeatMap(heat_data).add_to(m)
m
```

Out[72]: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In [ ]: