In [1]:
```python
pip install pandas
```

Requirement already satisfied: pandas in c:\users\samil\anaconda3\lib\site-packages (2.0.3)Note: you may need to restart the kernel to use updated packages.

Requirement already satisfied: pytz>=2020.1 in c:\users\samil\anaconda3\lib\site-packages (from pandas) (2020.1)
Requirement already satisfied: tzdata>=2022.1 in c:\users\samil\anaconda3\lib\site-packages (from pandas) (2023.3)
Requirement already satisfied: numpy>=1.20.3; python_version < "3.10" in c:\users\samil\anaconda3\lib\site-packages (from pandas) (1.24.4)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\samil\anaconda3\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: six>=1.5 in c:\users\samil\anaconda3\lib\site-packages (from python-dateutil>=2.8.2->pandas) (1.15.0)

In [2]:
```python
import matplotlib.pyplot as plt
from mpl_toolkits.mplot3d import Axes3D
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

C:\Users\Samil\anaconda3\lib\site-packages\pandas\core\computation\expressions.py:20: UserWarning: Pandas requires version '2.7.3' or newer of 'numexpr' (version '2.7.1' currently installed).
  from pandas.core.computation.check import NUMEXPR_INSTALLED

In [3]:
```python
raw_dataset=pd.read_csv("MarmaraAll.csv",sep=",")
```

In [4]:
```python
MarmaraAll= raw_dataset.copy()
MarmaraAll.head()
```

Out[4]:

|	Date	Longitude	Latitude	Depth	Magnitude
0	2023-07-27T08:32:50	27.810	40.791	11.75	3.1
1	2023-06-16T22:19:59	28.061	40.808	11.61	3.2
2	2023-06-05T10:11:30	27.546	40.337	10.41	3.0
3	2023-06-04T03:23:47	29.235	40.256	8.64	3.2
4	2023-06-03T11:07:51	29.020	40.420	11.87	3.1

In [5]:
```python
MarmaraAll.shape
```

Out[5]: (2465, 5)

In [22]:
```python
x = MarmaraAll.iloc[:,1].values
y = MarmaraAll.iloc[:,2].values
z = MarmaraAll.iloc[:,3].values
colors = MarmaraAll.iloc[:,4].values
sizes = MarmaraAll.iloc[:,4].values*8
```

In [23]:
```python
fig = plt.figure(figsize=(20, 10))
my_cmap = plt.get_cmap('hot')

plt.scatter(x, y, c=colors, s=sizes, cmap= 'jet')
ax.scatter(x, y, z, c=colors, s=sizes, cmap='jet')
cbar = plt.colorbar(ax.scatter(x, y, z, c=colors, s=sizes, cmap='jet'))

ax.set_xlabel('Longitude')
ax.set_ylabel('Latitude')
cbar.set_label('Magnitude')
ax.set_zlabel('Depth_km')
font_size = 700
dpi = (5000)
font_size = 1000
plt.show()
```
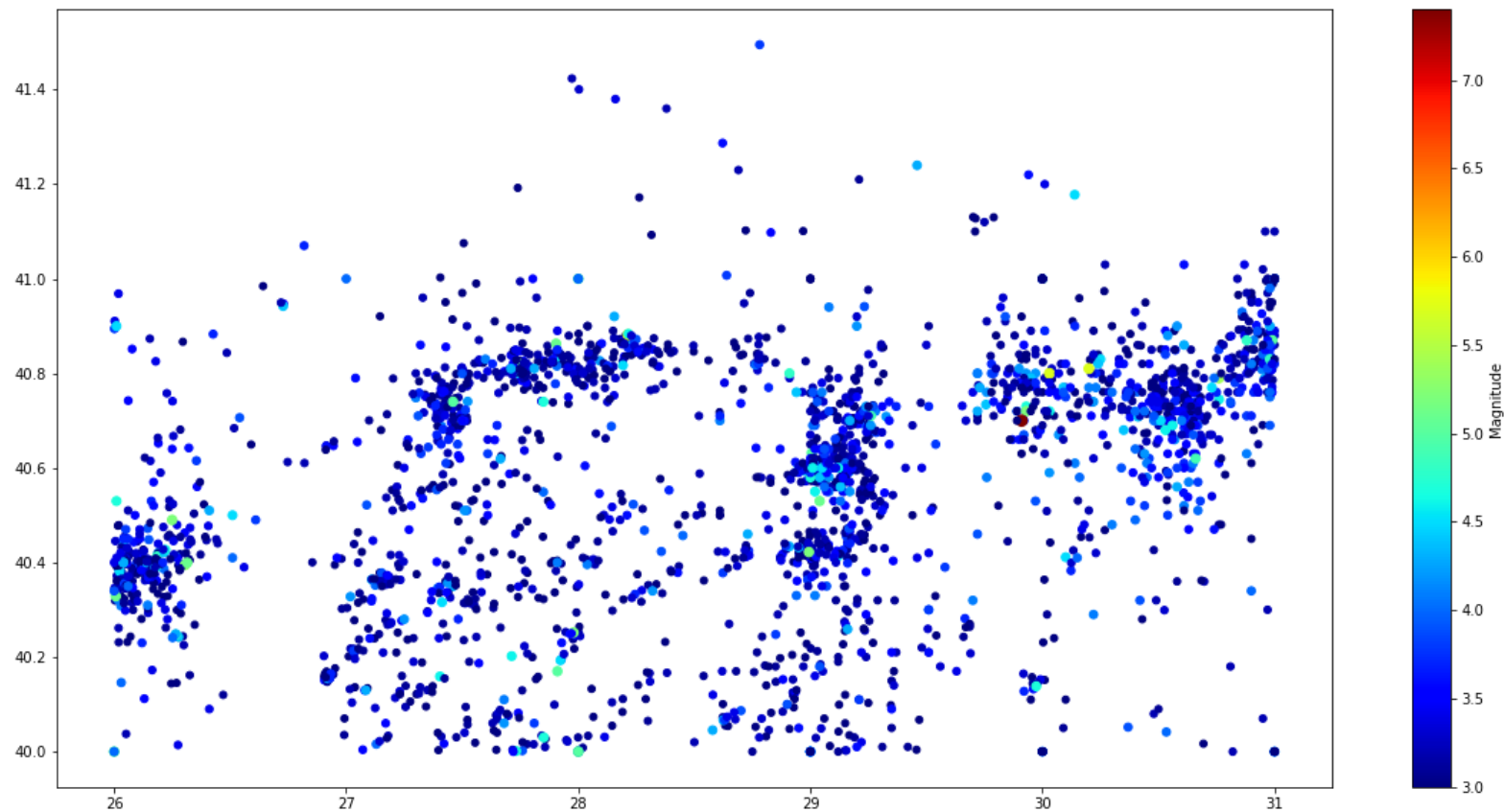
In [36]:
```python
x = MarmaraAll.iloc[:,1].values
y = MarmaraAll.iloc[:,2].values
z = MarmaraAll.iloc[:,3].values
colors = MarmaraAll.iloc[:,4].values
sizes = MarmaraAll.iloc[:,4].values*8
```

In [37]:
```python
fig = plt.figure(figsize=(15, 5))

ax = fig.add_subplot(111, projection='3d')

ax.scatter(x, y, z, c=colors, s=sizes, cmap='jet')


cbar = plt.colorbar(ax.scatter(x, y, z, c=colors, s=sizes, cmap='jet'))

cbar.set_label('Magnitude')


ax.set_xlabel('Longitude')
ax.set_ylabel('Latitude')
ax.set_zlabel('Depth_km')

font_size = 700

dpi = (5000)
font_size = 1000

ax.set_zlim(0, 35)


plt.show()
```
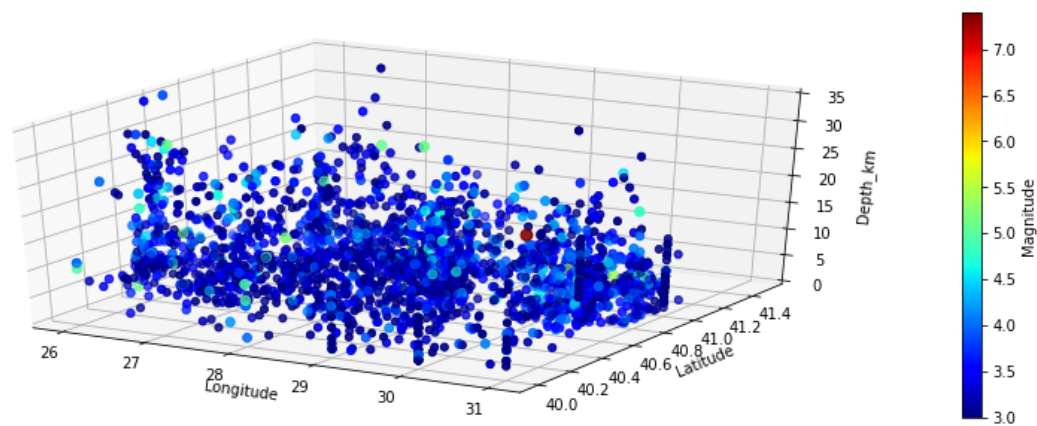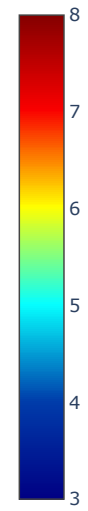
In [34]: `pip install plotly`

```
Requirement already satisfied: plotly in c:\users\samil\anaconda3\lib\site-packages (5.18.0)
Requirement already satisfied: packaging in c:\users\samil\anaconda3\lib\site-packages (from plotly) (20.4)
Requirement already satisfied: tenacity>=6.2.0 in c:\users\samil\anaconda3\lib\site-packages (from plotly) (8.2.3)
Requirement already satisfied: pyparsing>=2.0.2 in c:\users\samil\anaconda3\lib\site-packages (from packaging->plotly) (2.4.7)
Requirement already satisfied: six in c:\users\samil\anaconda3\lib\site-packages (from packaging->plotly) (1.15.0)
Note: you may need to restart the kernel to use updated packages.
```

In [28]:
```python
import plotly.graph_objects as go
# Yüksek çözünürlüklü dünya haritası verilerini çevrimiçi olarak alın
fig = go.Figure(go.Choroplethmapbox(
 geojson="https://raw.githubusercontent.com/johan/world.geo.json/master/countries.geo.json",
 locations=["USA", "CAN", "MEX", "RUS", "CHN"], # Örnek ülke kodları (ABD, Kanada, Meksika, Rusya, Çin)
 z=[1, 1, 1, 1, 1], # Ülkelere atanacak değerler (hepsi 1 olarak ayarlanmıştır)
 colorscale='Jet', # Renk skalası adı (Viridis, YlGnBu, Jet vb.)
 zmin=3,
 zmax=8,
 marker_opacity=0.9, # Ülke sınırlarının opaklığı
 marker_line_width=1, # Ülke sınırlarının kenarlık kalınlığı
))
# Örnek deprem verilerini oluşturun
deprem_verileri = {
 'Longitude': x,
 'Latitude': y,
 'Magnitude': colors,
 }
# Scatter plot ile deprem verilerini ekleyin
fig.add_trace(go.Scattermapbox(
 lat=deprem_verileri['Latitude'],
 lon=deprem_verileri['Longitude'],
 mode='markers',
 marker=dict(
 size=deprem_verileri['Magnitude'] * 2, # Magnitude değerine göre nokta boyutlarını belirleme
 color=deprem_verileri['Magnitude'], # Magnitude değerine göre renk skalasını belirleme
 colorscale='Jet', # Renk skalası adı (Viridis, YlGnBu, Jet vb.)
 ),
 ))
# Harita düzenini ve stilini belirleyin
fig.update_layout(
 mapbox_style="carto-positron", # Harita stilini belirleme (diğer stiller için: "open-street-map", "stamen-terrain" vb.)
 mapbox_zoom=6, # Harita yakınlaştırma düzeyini belirleme
 mapbox_center={"lat": 30.000, "lon": 30.0000}, # Harita merkezini belirleme (ABD'nin merkezi)
)
dpi = (9000)
font_size = 1000
# Grafiği görüntüleyin
fig.show()
```

```
In [ ]:
```

```
In [ ]:
```