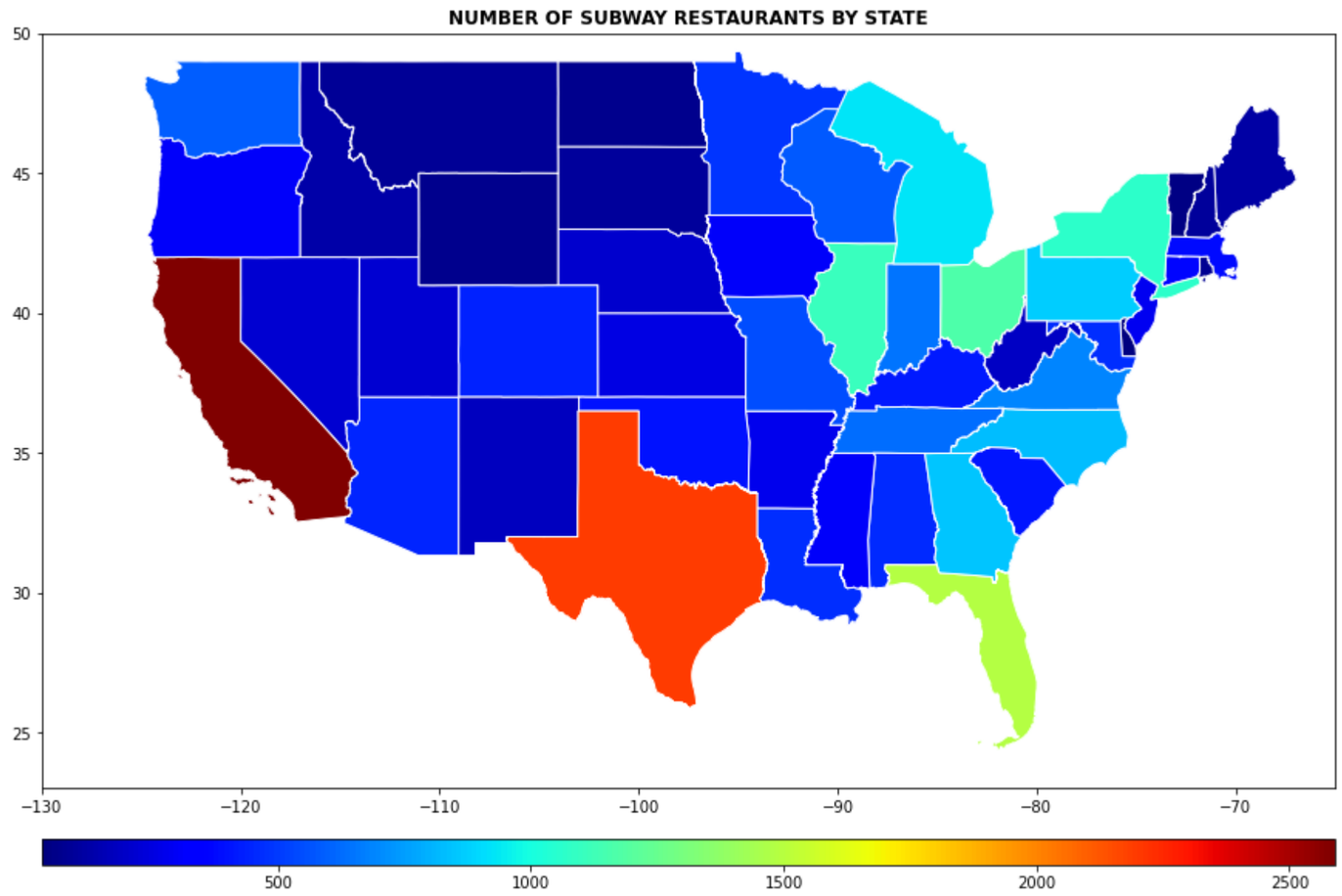
In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
import datetime as dt

import geopandas
from shapely.geometry import Point, Polygon, MultiPoint
```

In [2]:
```
pd.options.display.max_columns=100
```

In [3]:
```
df=pd.read_csv('subway.csv')
df=df[['name','street_address','city','state','zip_code','country','latitude','longitude']]
```

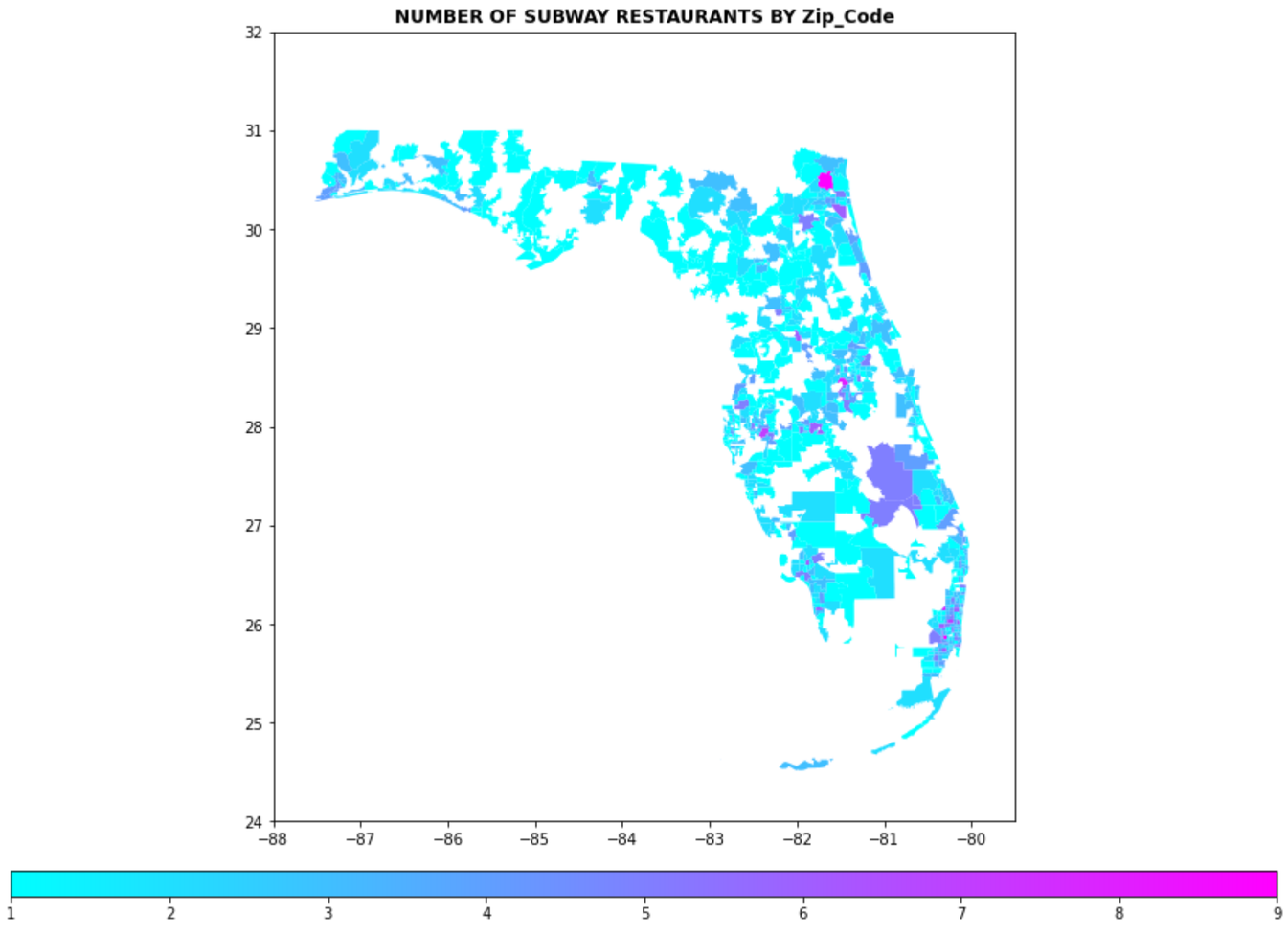
PLOTING USA STATES

In [4]:
```
states=geopandas.read_file('us-state-boundaries.shp')
grouped=df.groupby('state')['state'].count().reset_index(name='count')
grouped=grouped.merge(states[['stusab','geometry']],left_on='state',right_on='stusab')
grouped=geopandas.GeoDataFrame(grouped)

fig,ax=plt.subplots(1,1,figsize=(15,12))
grouped.plot(ax=ax,ec='white',column='count',legend=True,cmap='jet',
                                            legend_kwds={'orientation':'horizontal','pad':0.05,'aspect':50}
                                            )
plt.title('NUMBER OF SUBWAY RESTAURANTS BY STATE',fontweight='bold')
plt.ylim(23,50)
plt.xlim(-130,-65)
plt.show()
```



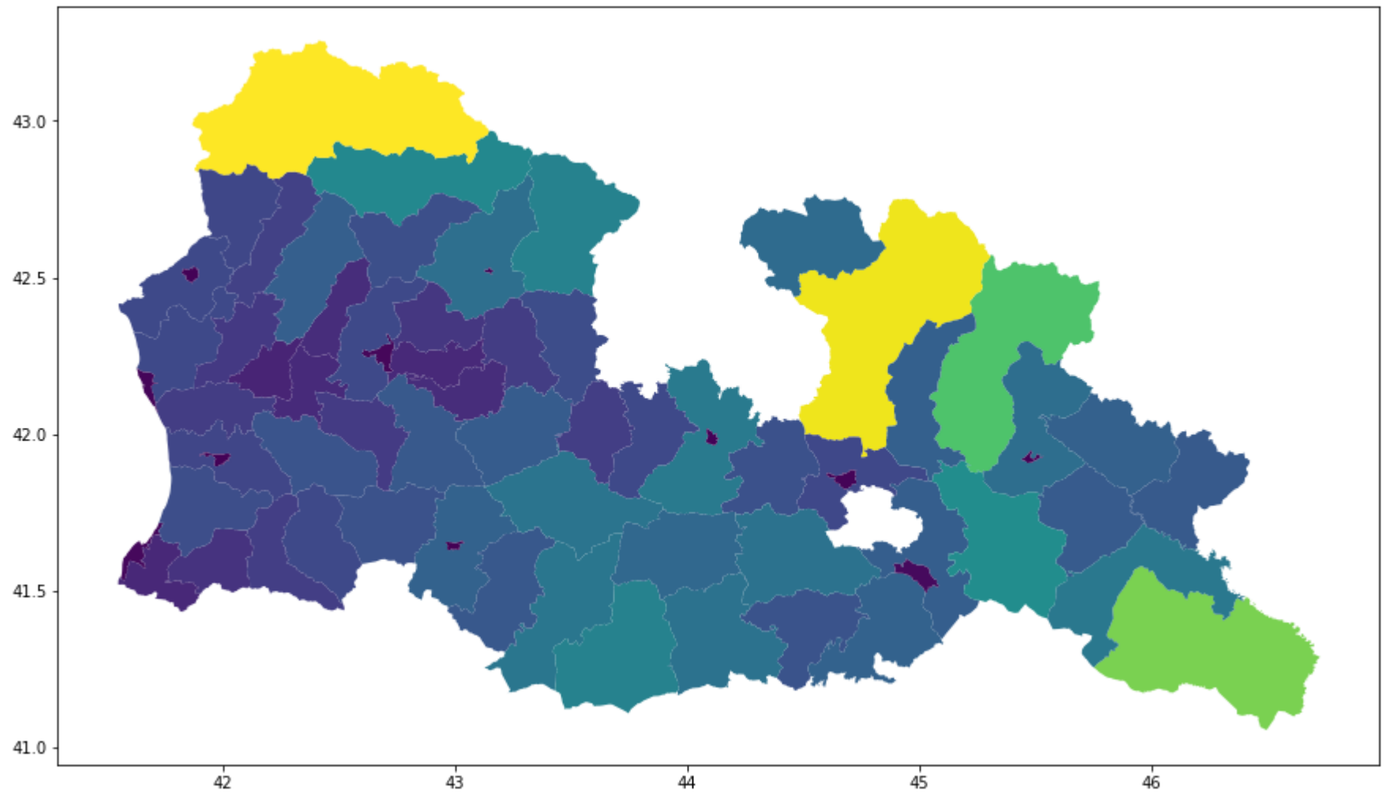
PLOTING ZIP CODES

In [5]:
```
zips=geopandas.read_file(r'C:\Users\berid\python სავარჯიშოები\tl_2019_us_zcta510\tl_2019_us_zcta510.shp')
grouped=df.groupby(['zip_code','state'])['zip_code'].count().reset_index(name='count')
grouped=grouped.merge(zips[['GEOID10','geometry']],left_on='zip_code',right_on='GEOID10')
grouped=geopandas.GeoDataFrame(grouped)

fig,ax=plt.subplots(1,1,figsize=(15,12))
grouped.query('state=="FL"').plot(ax=ax,column='count',cmap='cool',legend=True,legend_kwds={'orientation':'horizontal','pad':0.05,'aspect':50})

plt.title('NUMBER OF SUBWAY RESTAURANTS BY Zip_Code',fontweight='bold')
plt.ylim(24,32)
plt.xlim(-88,-79.5)
plt.show()
```



PLOTING GEORGIA

In [6]:
```
geo=geopandas.read_file(r'C:\Users\berid\python სავარჯიშოები\geo_adm_geostat_20191018_shp\geo_admbnda_adm2_geostat_20191018.shp')

fig,ax=plt.subplots(figsize=(15,10))
geo.plot(ax=ax,column='Shape_Area',cmap='viridis')
plt.show()
```



In [ ]: