import pandas as pd

import numpy as np

import seaborn as sns

import matplotlib.pyplot as plt

df=pd.read\_csv('C:\\Users\\unic\\Downloads\\2019.csv')

df.head()

def highlight\_max(s):

is\_max = s == s.max()

return ['background-color: limegreen' if v else '' for v in is\_max]

df.style.apply(highlight\_max)

df.shape

import seaborn as sns

sns.pairplot(df)

fig, axes = plt.subplots(nrows=2, ncols=2,constrained\_layout=True,figsize=(12,8))

sns.barplot(x='GDP per capita',y='Country or region',data=df.nlargest(10,'GDP per capita'),ax=axes[0,0],palette="Blues\_d")

sns.barplot(x='Social support' ,y='Country or region',data=df.nlargest(10,'Social support'),ax=axes[0,1],palette="YlGn")

sns.barplot(x='Healthy life expectancy' ,y='Country or region',data=df.nlargest(10,'Healthy life expectancy'),ax=axes[1,0],palette='OrRd')

sns.barplot(x='Freedom to make life choices' ,y='Country or region',data=df.nlargest(10,'Freedom to make life choices'),ax=axes[1,1],palette='YlOrBr')

print('max:',df['Score'].max())

print('min:',df['Score'].min())

add=df['Score'].max()-df['Score'].min()

grp=round(add/3,3)

print('range difference:',(grp))

low=df['Score'].min()+grp

mid=low+grp

print('upper bound of Low grp',low)

print('upper bound of Mid grp',mid)

print('upper bound of High grp','max:',df['Score'].max())

df.info()

cat=[]

for i in df.Score:

if(i>0 and i<low):

cat.append('Low')

elif(i>low and i<mid):

cat.append('Mid')

else:

cat.append('High')

df['Category']=cat

color = (df.Category == 'High' ).map({True: 'background-color: limegreen',False:'background-color: red'})

df.style.apply(lambda s: color)

df.loc[df['Country or region']=='India']

data={

'Country or region':['Canada','US','UK','India'],

'Score':[7.278,6.892,7.054,4.015],

'GDP per capita':[1.365,1.433,1.333,0.755],

'Social support':[1.505,1.457,1.538,0.765],

'Healthy life expectancy':[1.039,0.874,0.996,0.588],

'Freedom to make life choices':[0.584,0.454,0.45,0.498],

'Generosity':[0.285,0.28,0.348,0.2],

'Perceptions of corruption':[0.308,0.128,0.278,0.085]

}

d=pd.DataFrame(data)

d

ax = d.plot(y="Social support", x="Country or region", kind="bar",color='C3')

d.plot(y="GDP per capita", x="Country or region", kind="bar", ax=ax, color="C1")

d.plot(y="Healthy life expectancy", x="Country or region", kind="bar", ax=ax, color="C2")

plt.show()

ax = d.plot(y="Freedom to make life choices", x="Country or region", kind="bar",color='C3')

d.plot(y="Generosity", x="Country or region", kind="bar", ax=ax, color="C1",)

d.plot(y="Perceptions of corruption", x="Country or region", kind="bar", ax=ax, color="C2",)

plt.show()