


```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px
import numpy as np
import datetime

df=pd.read_csv('Students Social Media Addiction (1).csv')
###loading the data
```

Double-click (or enter) to edit


```
df.isnull().sum() ###No missing values found in the dataset so no removal or manipulation is needed
```



	0
Student_ID	0
Age	0
Gender	0
Academic_Level	0
Country	0
Avg_Daily_Usage_Hours	0
Most_Used_Platform	0
Affects_Academic_Performance	0
Sleep_Hours_Per_Night	0
Mental_Health_Score	0
Relationship_Status	0
Conflicts_Over_Social_Media	0
Addicted_Score	0




dtype: int64

df



	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Used_Platform	Affects_Academic_Performance	Sleep_Hours_Per_Night	Mental_Health_Score	Relationship_Status	Conflicts_Over_Social_Media	Addicted_Score
0	1	19	Female	Undergraduate	Bangladesh	5.2	Instagram	Yes	6.5	6	In Relationship	3	8
1	2	22	Male	Graduate	India	2.1	Twitter	No	7.5	8	Single	0	3
2	3	20	Female	Undergraduate	USA	6.0	TikTok	Yes	5.0	5	Complicated	4	9
3	4	18	Male	High School	UK	3.0	YouTube	No	7.0	7	Single	1	4
4	5	21	Male	Graduate	Canada	4.5	Facebook	Yes	6.0	6	In Relationship	2	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...
700	701	20	Female	Undergraduate	Italy	4.7	TikTok	No	7.2	7	In Relationship	2	5
701	702	23	Male	Graduate	Russia	6.8	Instagram	Yes	5.9	4	Single	5	9
702	703	21	Female	Undergraduate	China	5.6	WeChat	Yes	6.7	6	In Relationship	3	7
703	704	24	Male	Graduate	Japan	4.3	Twitter	No	7.5	8	Single	2	4
704	705	19	Female	Undergraduate	Poland	6.2	Facebook	Yes	6.3	5	Single	4	8

705 rows × 13 columns



Next steps: [Generate code with df](#) [View recommended plots](#) [New interactive sheet](#)

```
### Creating separate columns for analysis and display
df['Gender_Num'] = df['Gender'].map({'Male': 1, 'Female': 0}) # for math or heatmap
df['Affects_Academic_Num'] = df['Affects_Academic_Performance'].map({'Yes': 1, 'No': 0}) # for math and for mean calculation etc later operations
df
```

	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Used_Platform	Affects_Academic_Performance	Sleep_Hours_Per_Night	Mental_Health_Score	Relationship_Status	Conflicts_Over_Social_Media	Addicted_Score	Gender_Num	Affects_Academic_Num
0	1	19	Female	Undergraduate	Bangladesh	5.2	Instagram	Yes	6.5	6	In Relationship	3	8	0	1
1	2	22	Male	Graduate	India	2.1	Twitter	No	7.5	8	Single	0	3	1	0
2	3	20	Female	Undergraduate	USA	6.0	TikTok	Yes	5.0	5	Complicated	4	9	0	1
3	4	18	Male	High School	UK	3.0	YouTube	No	7.0	7	Single	1	4	1	0
4	5	21	Male	Graduate	Canada	4.5	Facebook	Yes	6.0	6	In Relationship	2	7	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
700	701	20	Female	Undergraduate	Italy	4.7	TikTok	No	7.2	7	In Relationship	2	5	0	0
701	702	23	Male	Graduate	Russia	6.8	Instagram	Yes	5.9	4	Single	5	9	1	1
702	703	21	Female	Undergraduate	China	5.6	WeChat	Yes	6.7	6	In Relationship	3	7	0	1
703	704	24	Male	Graduate	Japan	4.3	Twitter	No	7.5	8	Single	2	4	1	0
704	705	19	Female	Undergraduate	Poland	6.2	Facebook	Yes	6.3	5	Single	4	8	0	1

705 rows × 15 columns

Next steps:

Generate code with df

View recommended plots

New interactive sheet

```
average_use_comparison_by_gender=df.groupby('Gender')['Avg_Daily_Usage_Hours'].mean().reset_index()
average_use_comparison_by_gender
```

	Gender	Avg_Daily_Usage_Hours
0	Female	5.011048
1	Male	4.826136

Next steps:

Generate code with average\_use\_comparison\_by\_gender

View recommended plots

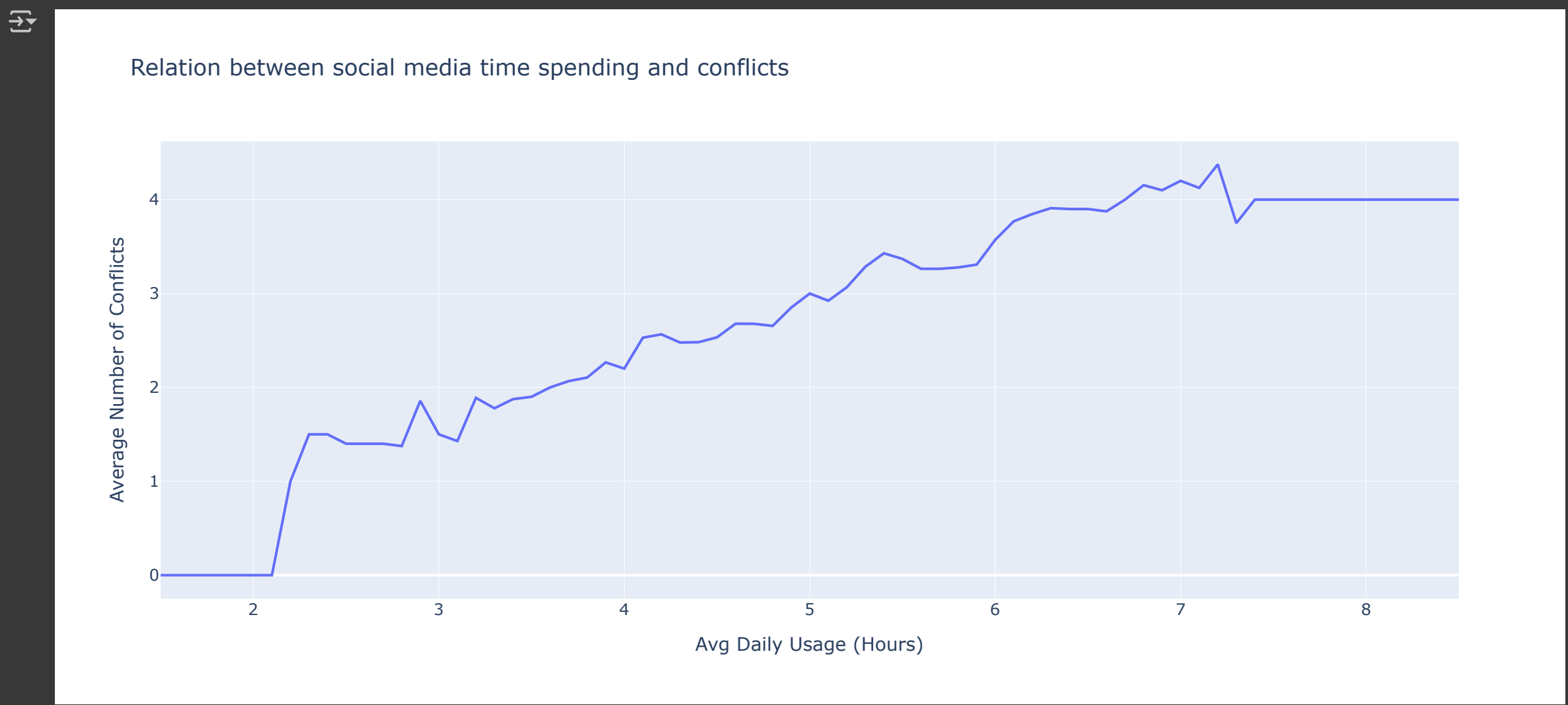
New interactive sheet

```
fig1=px.bar(average_use_comparison_by_gender,x="Gender",y="Avg_Daily_Usage_Hours",title="average usage by gender",text="Avg_Daily_Usage_Hours")
fig1.show()
```



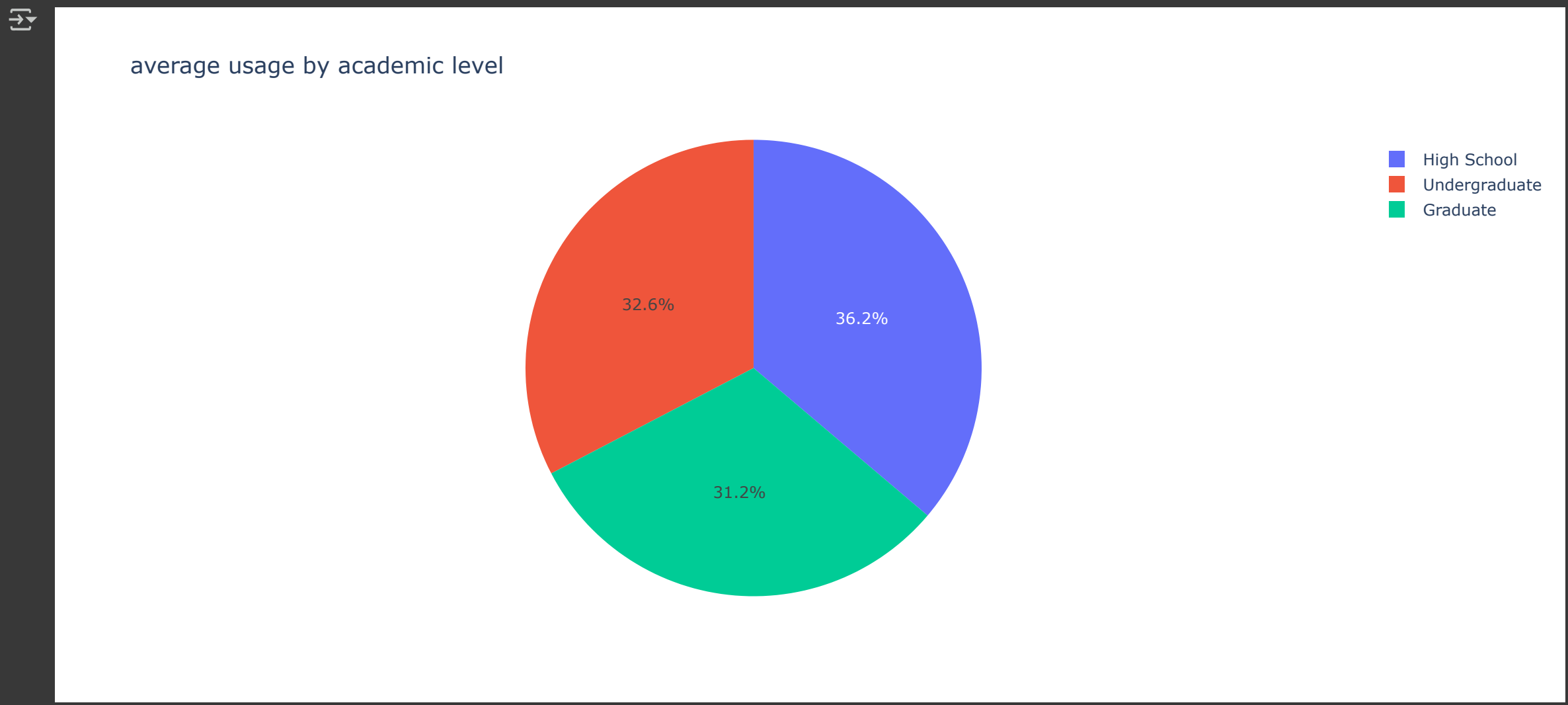
```
###"On average females spend 1 hour more on social media daily compared to males"
```

```
conflict_trend = df.groupby('Avg_Daily_Usage_Hours')['Conflicts_Over_Social_Media'].mean().reset_index()
fig2 = px.line(conflict_trend,
               x='Avg_Daily_Usage_Hours',
               y='Conflicts_Over_Social_Media',
               title='Relation between social media time spending and conflicts')
fig2.update_layout(xaxis_title='Avg Daily Usage (Hours)',
                  yaxis_title='Average Number of Conflicts')
fig2.show()
```



####"Social media use of up to 2 hours a day seems harmless but usage beyond that is linked to more conflicts"

```
academic_level=df.groupby('Academic_Level')['Avg_Daily_Usage_Hours'].mean().reset_index()
academic_level
fig3=px.pie(academic_level,names='Academic_Level',values='Avg_Daily_Usage_Hours',title="average usage by academic level")
fig3.show()
```

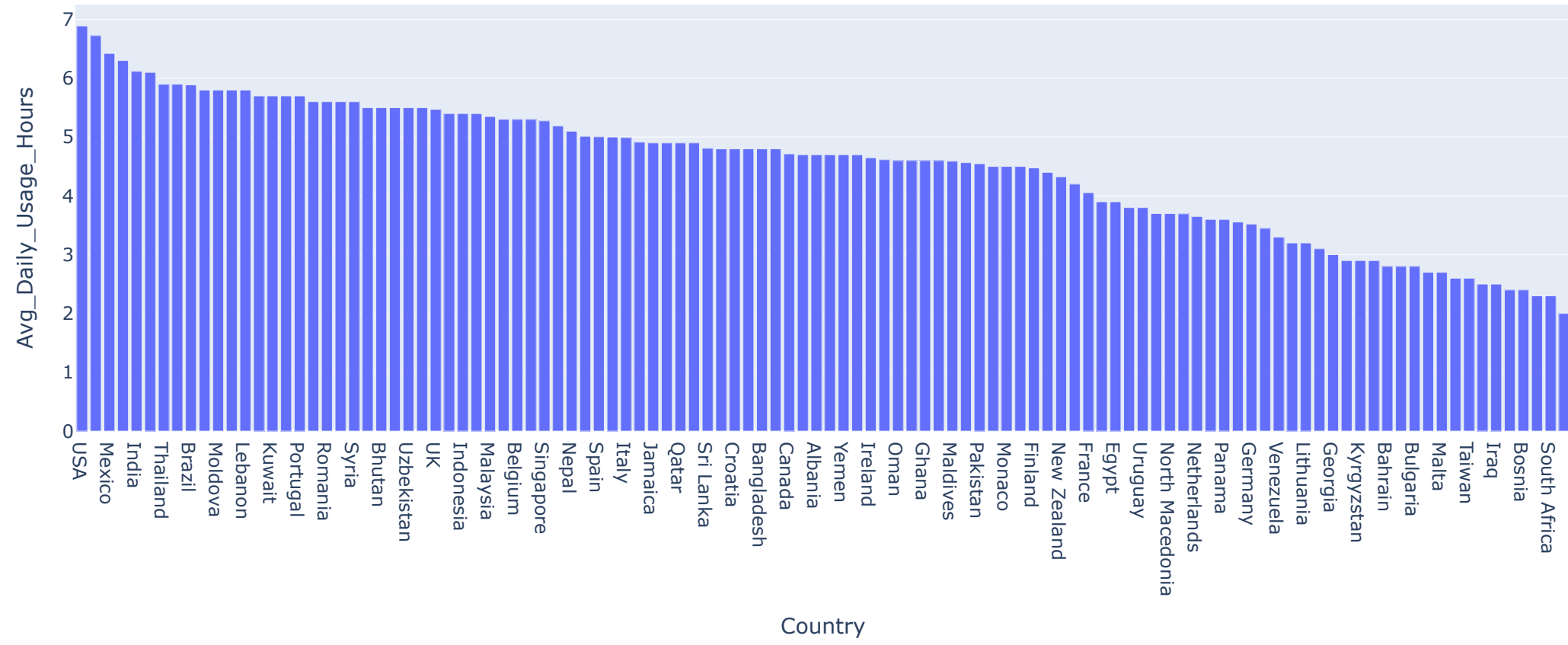


###Individuals with only a high school education use social media more than those with undergraduate or graduate degrees

```
country_wise_usage = df.groupby('Country')['Avg_Daily_Usage_Hours'].mean().reset_index()
country_wise_usage = country_wise_usage.sort_values(by='Avg_Daily_Usage_Hours', ascending=False)
px.bar(country_wise_usage,x='Country',y='Avg_Daily_Usage_Hours',title="average usage by country")
```



average usage by country



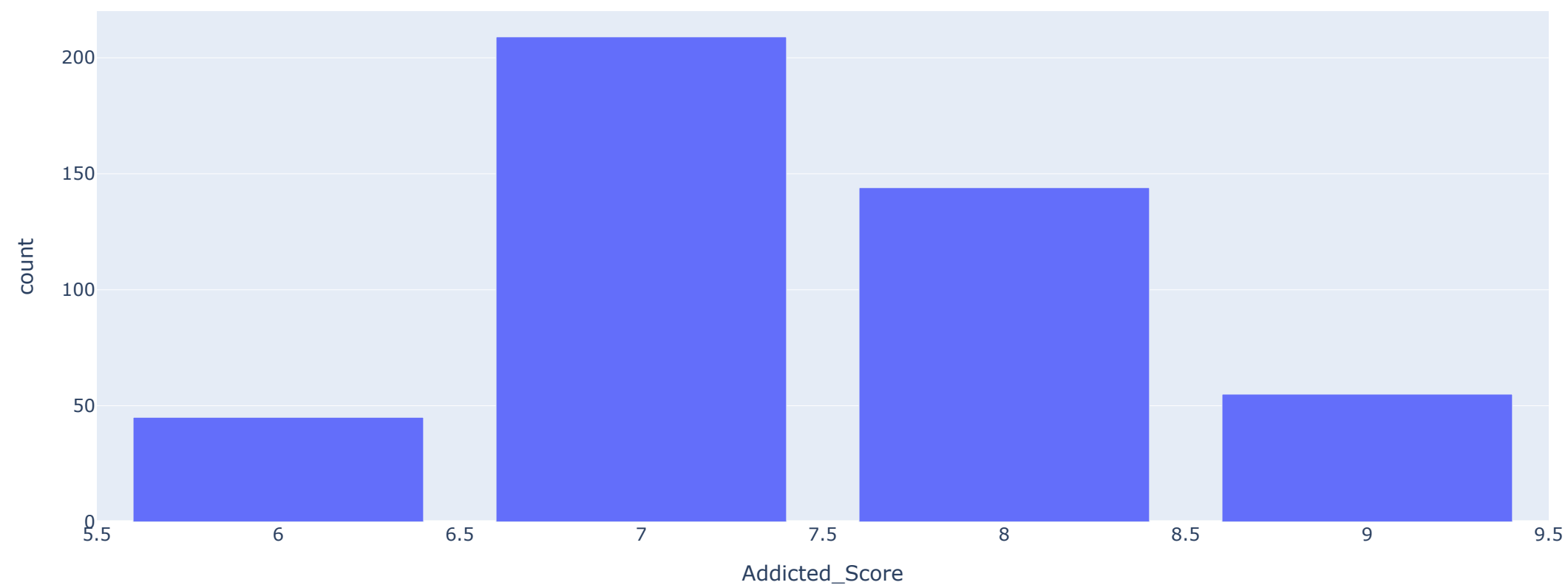
###The chart shows that the USA has the highest average daily social media usage among all countries.

Double-click (or enter) to edit

```
addiction_scorevsacademic_performance=df.groupby('Addicted_Score')['Affects_Academic_Num'].value_counts().reset_index(name='count')
filtered_df = addiction_scorevsacademic_performance[addiction_scorevsacademic_performance['Affects_Academic_Num'] == 1].reset_index(drop=True)
filtered_df
px.bar(filtered_df,x='Addicted_Score',y='count',title="addiction score vs academic performance")
```



addiction score vs academic performance



#####It is evident that individuals with an addiction score above 5 tend to experience a negative impact on their academic performance.


```
def risklevel(hours):
    if hours <= 2:
        return 'Low'
    elif hours <= 5:
        return 'Medium'
    else:
        return 'High'
df['risklevels']=df['Avg_Daily_Usage_Hours'].apply(risklevel)
df
```

	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Used_Platform	Affects_Academic_Performance	Sleep_Hours_Per_Night	Mental_Health_Score	Relationship_Status	Conflicts_Over_Social_Media	Addicted_Score	Gender_Num	Affects_Academic_Num	risklevels
0	1	19	Female	Undergraduate	Bangladesh	5.2	Instagram	Yes	6.5	6	In Relationship	3	8	0	1	High
1	2	22	Male	Graduate	India	2.1	Twitter	No	7.5	8	Single	0	3	1	0	Medium
2	3	20	Female	Undergraduate	USA	6.0	TikTok	Yes	5.0	5	Complicated	4	9	0	1	High
3	4	18	Male	High School	UK	3.0	YouTube	No	7.0	7	Single	1	4	1	0	Medium
4	5	21	Male	Graduate	Canada	4.5	Facebook	Yes	6.0	6	In Relationship	2	7	1	1	Medium
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
700	701	20	Female	Undergraduate	Italy	4.7	TikTok	No	7.2	7	In Relationship	2	5	0	0	Medium
701	702	23	Male	Graduate	Russia	6.8	Instagram	Yes	5.9	4	Single	5	9	1	1	High
702	703	21	Female	Undergraduate	China	5.6	WeChat	Yes	6.7	6	In Relationship	3	7	0	1	High
703	704	24	Male	Graduate	Japan	4.3	Twitter	No	7.5	8	Single	2	4	1	0	Medium
704	705	19	Female	Undergraduate	Poland	6.2	Facebook	Yes	6.3	5	Single	4	8	0	1	High

705 rows × 16 columns

Next steps:

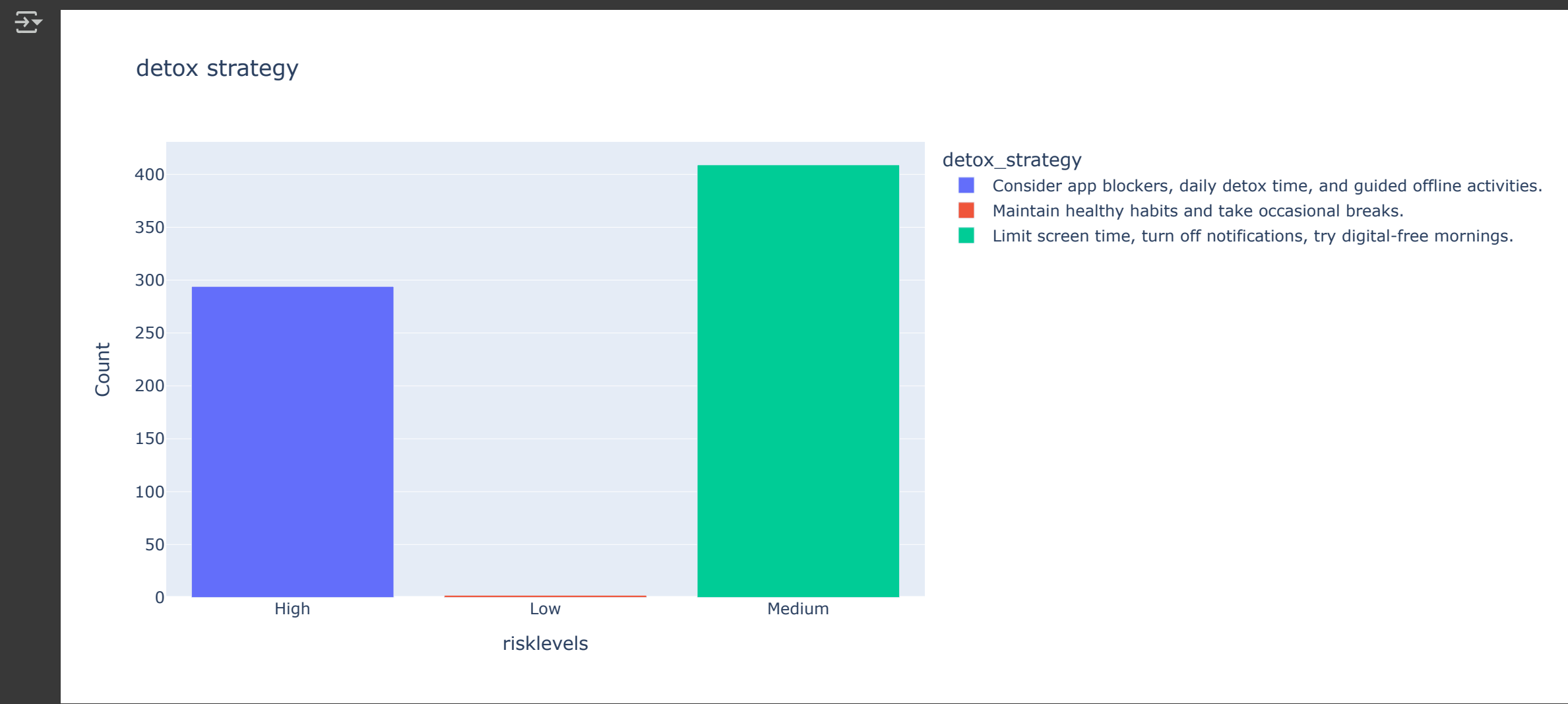
Generate code with df

 View recommended plots

New interactive sheet

```
def detox_strategy(risk):  
    """detox strategy function  
    if risk == 'Low':  
        return 'Maintain healthy habits and take occasional breaks.'  
    elif risk == 'Medium':  
        return 'Limit screen time, turn off notifications, try digital-free mornings.'  
    else:  
        return 'Consider app blockers, daily detox time, and guided offline activities.'
```

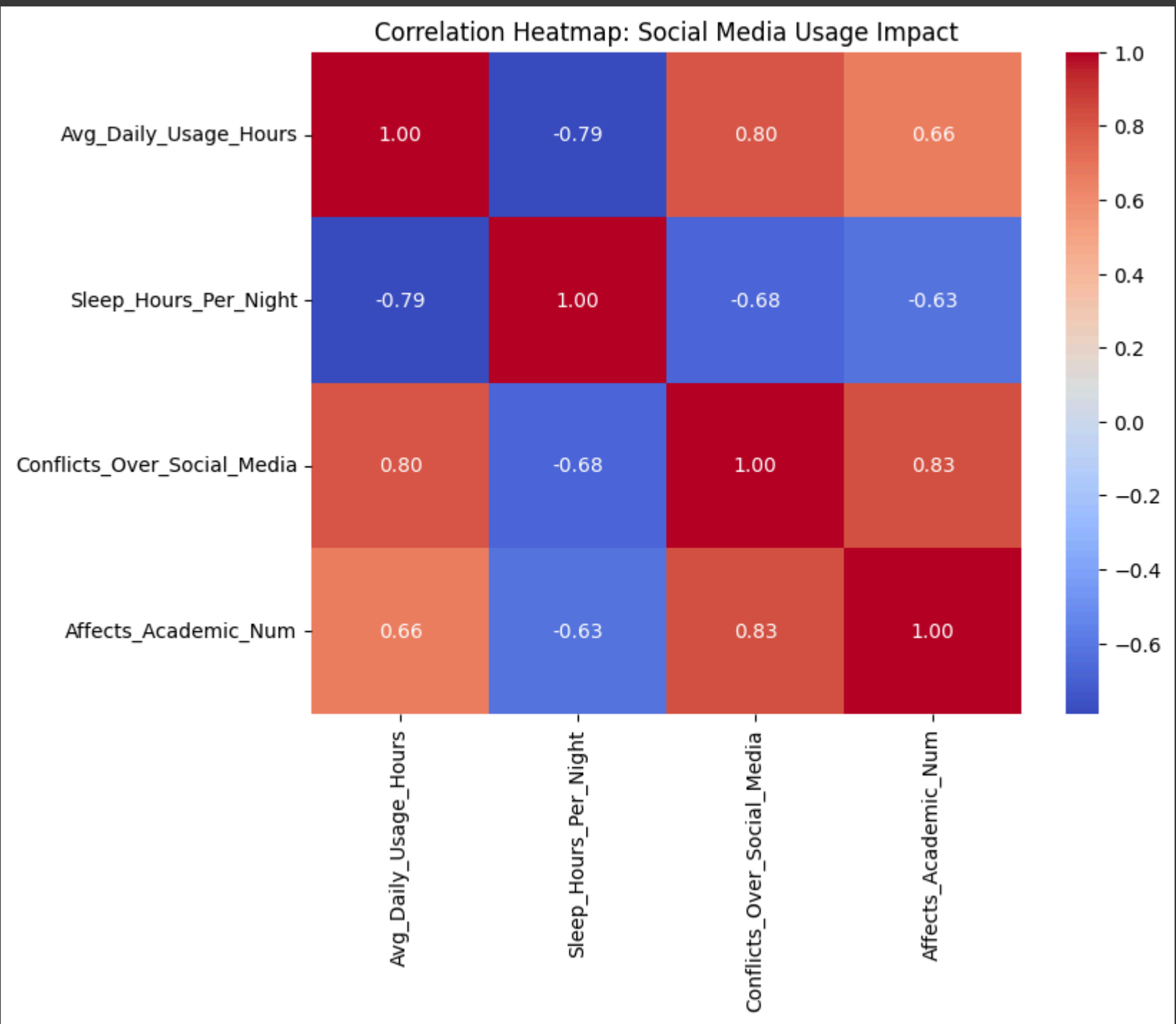
```
df['detox_strategy'] = df['risklevels'].apply(detox_strategy)  
riskfig=df.groupby('risklevels')['detox_strategy'].value_counts().reset_index(name='Count')  
px.bar(riskfig,x='risklevels',y='Count',color='detox_strategy',title="detox strategy")
```



Double-click (or enter) to edit

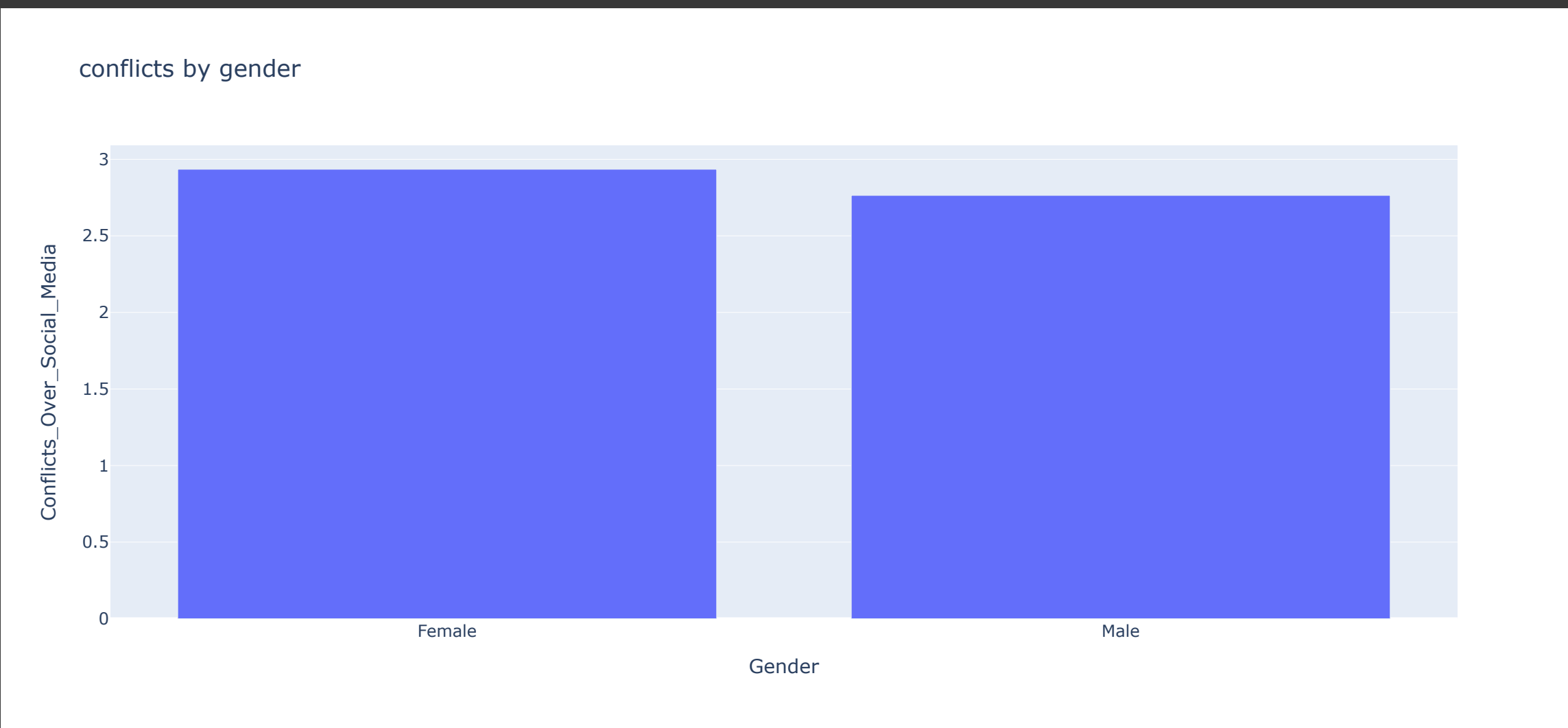
```
# Selecting only numeric columns for correlation  
heatmap_data = df[['Avg_Daily_Usage_Hours',  
                  'Sleep_Hours_Per_Night',  
                  'Conflicts_Over_Social_Media',  
                  'Affects_Academic_Num']]  
  
corr = heatmap_data.corr()  
  
#heatmap  
plt.figure(figsize=(8,6))  
sns.heatmap(corr, annot=True, cmap='coolwarm', fmt=".2f")  
plt.title('Correlation Heatmap: Social Media Usage Impact')
```

```
plt.title('Correlation Heatmap: Social Media Usage Impact')
plt.show()
```



###The heatmap reveals a strong positive correlation between daily usage hoursand conflicts over social media, and a negative correlation with sleep hours, indicating that higher screen time may lead to both increased conflicts and reduced sleep

```
conflicts_by_gender = df.groupby('Gender')['Conflicts_Over_Social_Media'].mean().reset_index()
px.bar(conflicts_by_gender,x='Gender',y='Conflicts_Over_Social_Media',title="conflicts by gender")
```



###females have slightly more conflicts on social media than males

### Story Summary – Combating Social Media Addiction  
###Story Summary – Insights on Social Media Addiction

""On average, female students spend 1 hour more on social media daily compared to male students

Usage of up to 2 hours per day appears relatively harmless, but going beyond that correlates with a sharp rise in online conflicts

Individuals with only a high school education reported the highest daily usage in compare those with undergraduate or graduate degrees

Among all countries in the dataset the USA recorded the highest average daily social media usage

Students with an addiction score above 5 showed higher likelihood of reporting negative impacts on academic performance

Sleep duration generally decreased as daily usage hours increased hinting at a negative impact on rest

Female students also reported slightly more conflicts over social media than male students

Medium- and high-risk users consistently displayed more academic disruption compared to low-risk users

The data suggests that targeted digital detox strategies could help reduce conflicts and improve academic outcomes

Overall the findings highlights the urgent need for awareness programs to promote balanced social media habits""

🔄 'On average, female students spend 1 hour more on social media daily compared to male students\n\nUsage of up to 2 hours per day appears relatively harmless, but going beyond that correlates with a sharp rise in online conflicts\n\nIndividuals with only a high school education reported the highest daily usage in compare those with undergraduate or graduate degrees\n\nAmong all countries in the dataset the USA recorded the highest average daily social media usage\n\nStudents with an addiction score above 5 showed higher likelihood of reporting negative impacts on academic performance\n\nSleep duration generally decreased as daily usage hours increased hinting at a negative impact on rest\n\nFemale students also reported slightly more conflicts over social media than male students\n\nMedium- and high-risk users consistently displayed more academic disruption compared to low-risk users\n\nThe data suggests that targeted digital detox strategies could help reduce conflicts and improve academic outcomes...'