

```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px
import folium
from folium.plugins import HeatMap
```

```
df = pd.read_csv('/content/drive/MyDrive/accidents.csv')
```

df



	Accident_Index	Location_Easting_OSGR	Location_Northing_OSGR	Longitude	Latitude	Police_Force	Accident_Severity	Number_of_Vel
0	200812D100026	460830.0	452510.0	-1.074261	53.965099	12	3	
1	2.00912E+12	460220.0	446720.0	-1.084698	53.913137	12	3	
2	2.00912E+12	461460.0	448010.0	-1.065564	53.924585	12	3	
3	2.00912E+12	465130.0	451620.0	-1.008917	53.956579	12	2	
4	2.00912E+12	460850.0	452490.0	-1.073960	53.964917	12	3	
...
6510	2.01812E+12	460989.0	455804.0	-1.071206	53.994701	12	3	
6511	2.01812E+12	460466.0	451339.0	-1.080066	53.954638	12	3	
6512	2.01812E+12	459406.0	452928.0	-1.095908	53.969040	12	3	
6513	2.01812E+12	461323.0	452491.0	-1.066777	53.964890	12	2	
6514	2.01812E+12	460126.0	454134.0	-1.084697	53.979795	12	3	

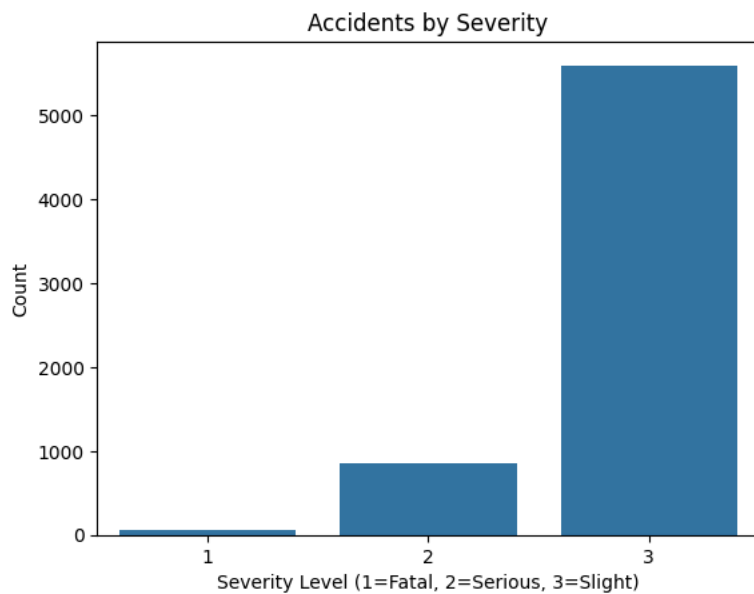
6515 rows x 32 columns

```
# Convert 'Date' and 'Time' to datetime
df['Date'] = pd.to_datetime(df['Date'], dayfirst=True, errors='coerce')
df['Time'] = pd.to_datetime(df['Time'], format='%H:%M', errors='coerce').dt.time

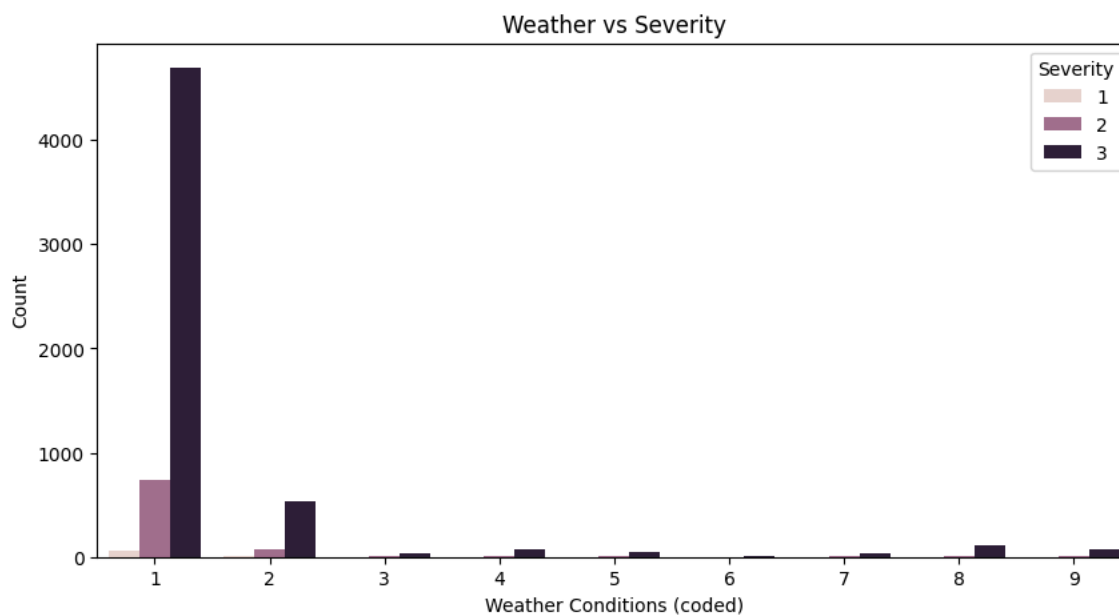
# Drop rows with missing Date or Severity
df = df.dropna(subset=['Date', 'Accident_Severity'])

# Count plot for severity
sns.countplot(data=df, x='Accident_Severity')
plt.title("Accidents by Severity")
plt.xlabel("Severity Level (1=Fatal, 2=Serious, 3=Slight)")
plt.ylabel("Count")
plt.show()
```

What can I help you build?



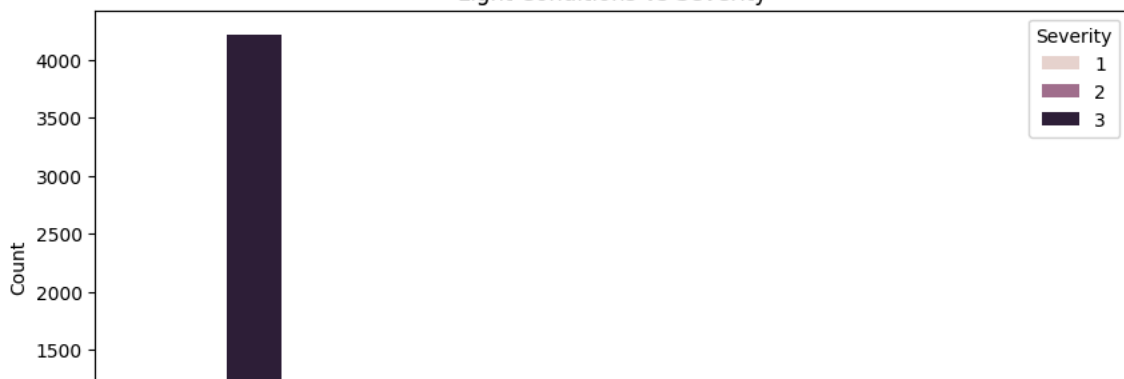
```
plt.figure(figsize=(10, 5))
sns.countplot(data=df, x='Weather_Conditions', hue='Accident_Severity')
plt.title("Weather vs Severity")
plt.xlabel("Weather Conditions (coded)")
plt.ylabel("Count")
plt.legend(title='Severity')
```



```
plt.figure(figsize=(10, 5))
sns.countplot(data=df, x='Light_Conditions', hue='Accident_Severity')
plt.title("Light Conditions vs Severity")
plt.xlabel("Light Conditions (coded)")
plt.ylabel("Count")
plt.legend(title='Severity')
```



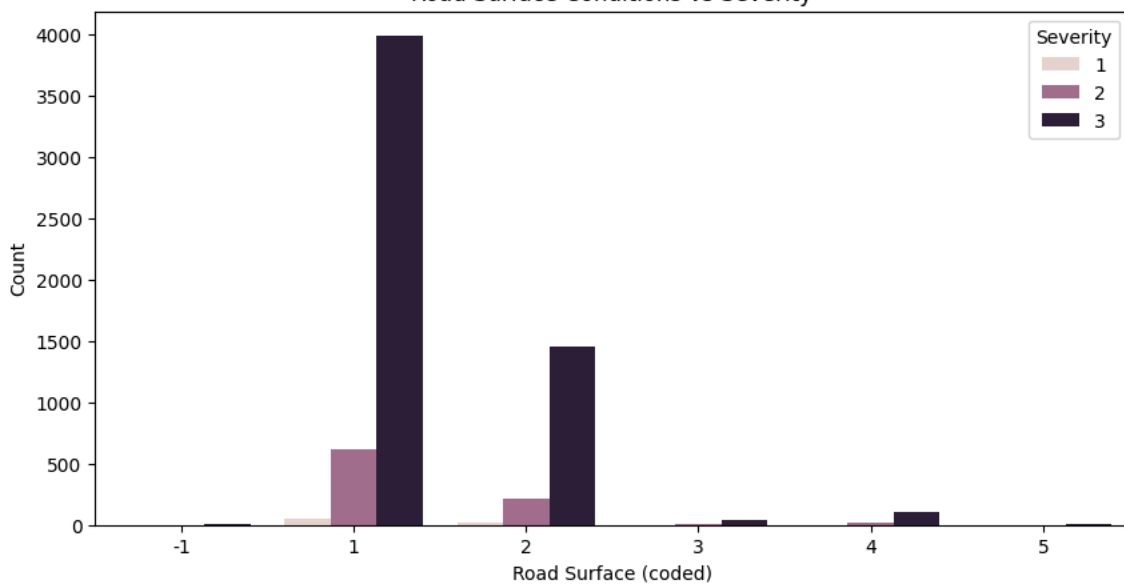
Light Conditions vs Severity



```
plt.figure(figsize=(10, 5))
sns.countplot(data=df, x='Road_Surface_Conditions', hue='Accident_Severity')
plt.title("Road Surface Conditions vs Severity")
plt.xlabel("Road Surface (coded)")
plt.ylabel("Count")
plt.legend(title='Severity')
plt.show()
```



Road Surface Conditions vs Severity



```
# Create base map
m = folium.Map(location=[df['Latitude'].mean(), df['Longitude'].mean()], zoom_start=7)
```

```
# Prepare heatmap data
heat_data = df[['Latitude', 'Longitude']].dropna().values.tolist()
HeatMap(heat_data[:1000]).add_to(m) # sample for performance
```



```
<folium.plugins.heat_map.HeatMap at 0x7c0c68340110>
```

```
# Save map
```