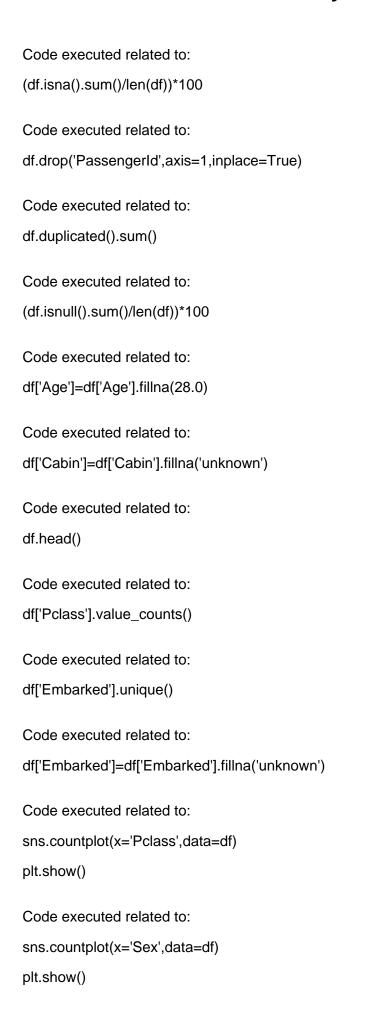
#### **Brief Summary**

This notebook analyzes the Titanic dataset to understand the factors influencing passenger survival. The work involves data cleaning, exploratory data analysis (EDA), feature engineering, model building using machine learning classifiers, and performance evaluation.

machine learning classifiers, and performance evaluation.
Code executed related to:
import kagglehub
brendan45774_test_file_path = kagglehub.dataset_download('brendan45774/test-file')
print('Data source import complete.')
Code executed related to:
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
Code executed related to:
df=pd.read_csv("tested.csv")
Code executed related to:
df1=df.copy()
Code executed related to:
df.head()
Code executed related to:
df.tail()
Code executed related to:
df.dtypes
Code executed related to:
df.info()



Code executed related to:	:			
sns.countplot(x='Sex',data	a=df,hue='Survi	ved')		
plt.show()				
Code executed related to:	:			
sns.countplot(x='Pclass',d	data=df,hue='Sเ	urvived')		
plt.show()				
Code executed related to:	:			
df['Age']=df1['Age']				
Code executed related to:	:			
df["Age_group"]	=	pd.cut(x=df['Age'],	bins=[0,10,20,30,40,50,60,70,80]	
labels=["0_10","10_20","2	20_30",'30_40','4	40_50','50_60','60_70','70_80'])		
Code executed related to:	:			
df['Age']				
Code executed related to:	:			
df['Age_group']				
Code executed related to:	:			
sns.countplot(x='Age_gro	up',data=df,hue	e='Survived')		
plt.show()				
Code executed related to:	:			
df['Age'].isna().sum()				
Code executed related to:	:			
df['Age'].fillna(df['Age'].me	ean(),inplace=Ti	rue)		
Code executed related to:	:			
df['Age'].isna().sum()				
Code executed related to:	:			
df['Age']=df['Age'].astype(int)				

```
Code executed related to:
df['Age'].max()
Code executed related to:
df['Age'].min()
Code executed related to:
df.dtypes
Code executed related to:
sns.countplot(x='Embarked',data=df,hue='Survived')
plt.show()
Code executed related to:
sns.countplot(x='SibSp',data=df,hue='Sex')
plt.show()
Code executed related to:
df[df['Age'].isnull()]
Code executed related to:
sns.boxplot(x='Pclass',y='Age',data=df1)
plt.show()
Code executed related to:
def age_fillna(df):
  for i in range(0,len(df)):
     if(pd.isnull(df.Age[i])):
       if(df['Pclass']==1):
          df.Age[i]=38
       elif (df['Pclass']==2):
          df.Age[i]=28
       elif (df['Pclass']==3):
          df.Age[i]=24
       else:
```

Code executed related to:	
age_fillna(df).head(10)	
Code executed related to:	