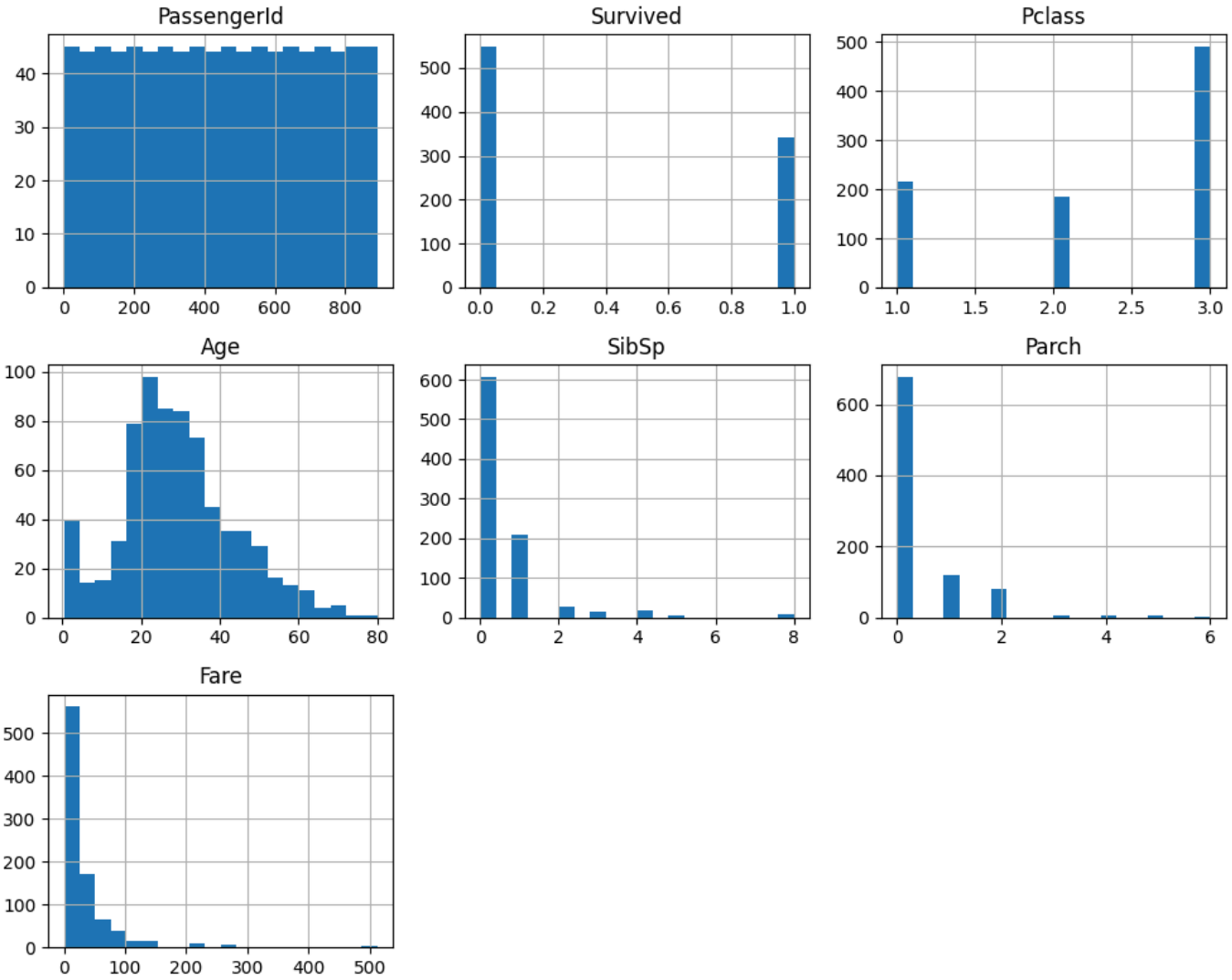
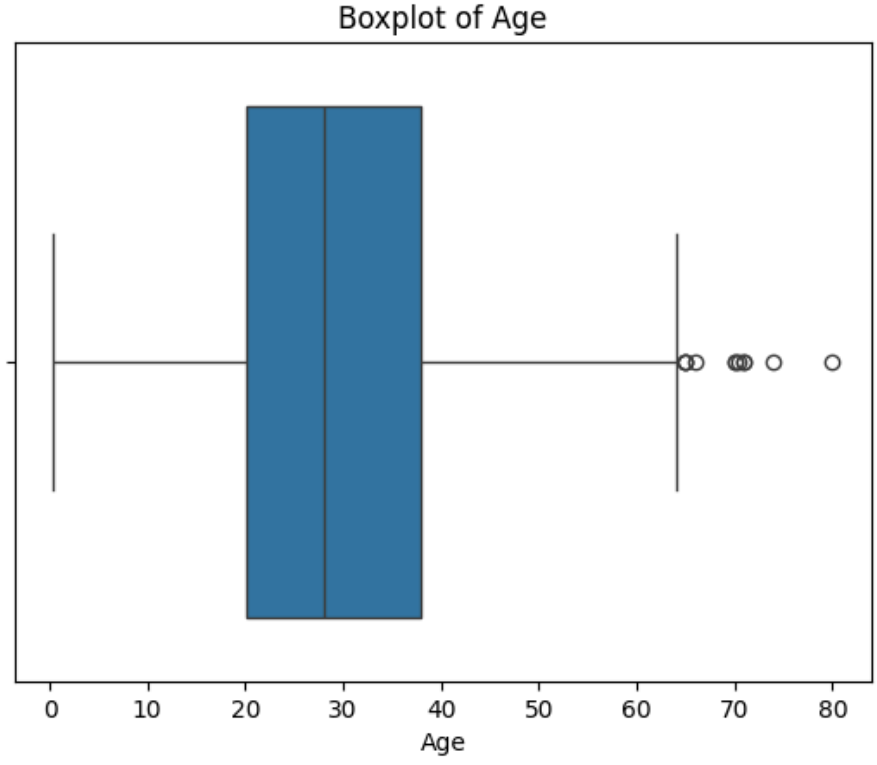
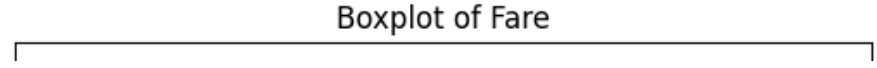
```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
df = pd.read_csv('/Titanic-Dataset.csv')
df.describe()
```

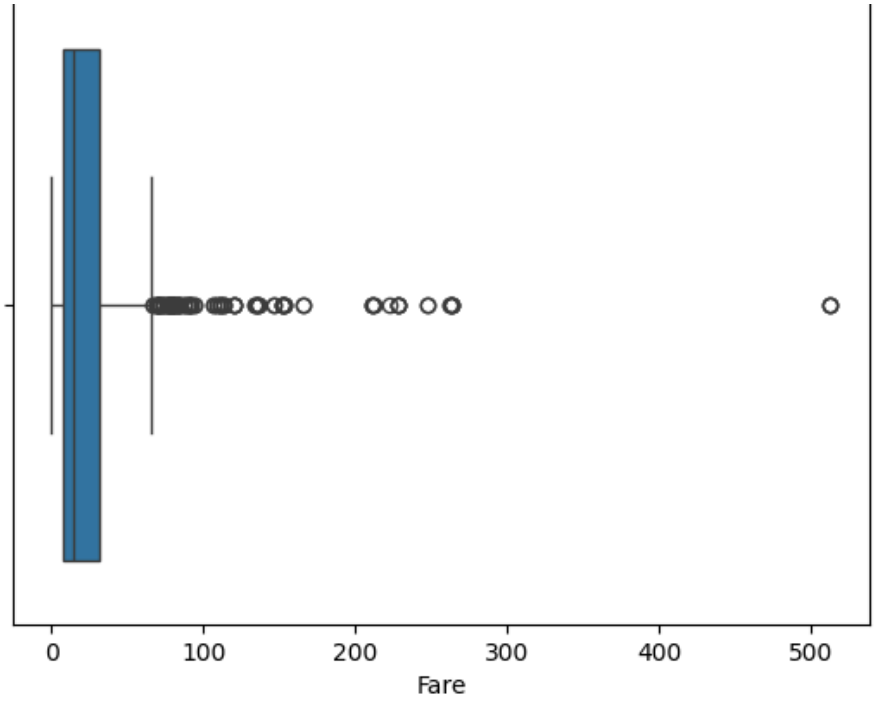
	PassengerId	Survived	Pclass	Age	SibSp	Parch	Fare
count	891.000000	891.000000	891.000000	714.000000	891.000000	891.000000	891.000000
mean	446.000000	0.383838	2.308642	29.699118	0.523008	0.381594	32.204208
std	257.353842	0.486592	0.836071	14.526497	1.102743	0.806057	49.693429
min	1.000000	0.000000	1.000000	0.420000	0.000000	0.000000	0.000000
25%	223.500000	0.000000	2.000000	20.125000	0.000000	0.000000	7.910400
50%	446.000000	0.000000	3.000000	28.000000	0.000000	0.000000	14.454200
75%	668.500000	1.000000	3.000000	38.000000	1.000000	0.000000	31.000000
max	891.000000	1.000000	3.000000	80.000000	8.000000	6.000000	512.329200

```
df.hist(figsize=(10, 8), bins=20)
plt.tight_layout()
plt.show()
num_features = ['Age', 'Fare']
for col in num_features:
 sns.boxplot(data=df, x=col)
 plt.title(f'Boxplot of {col}')
 plt.show()
```

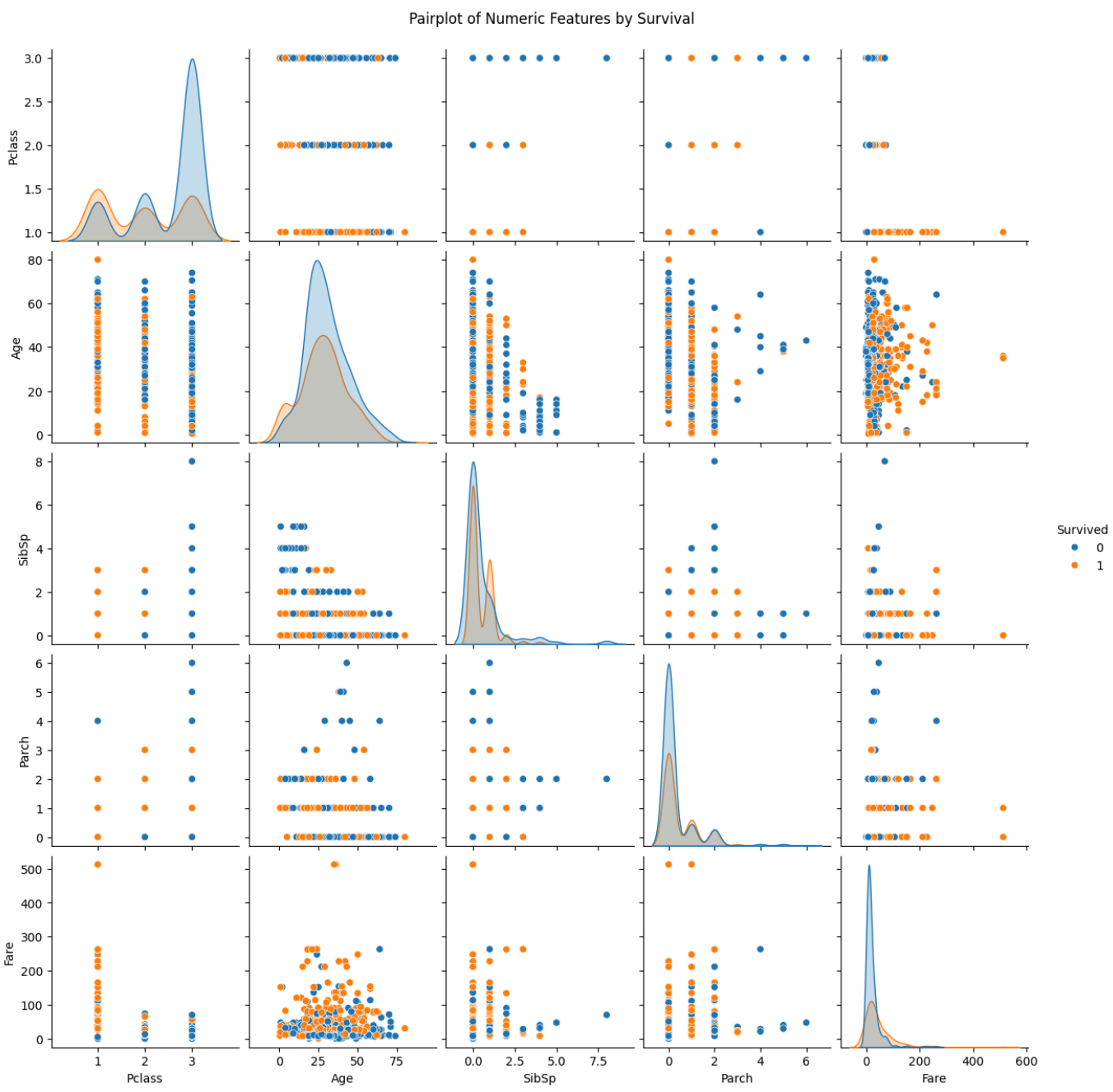

PassengerId
Survived
Pclass
Age
SibSp
Parch
Fare


Boxplot of Age
Age

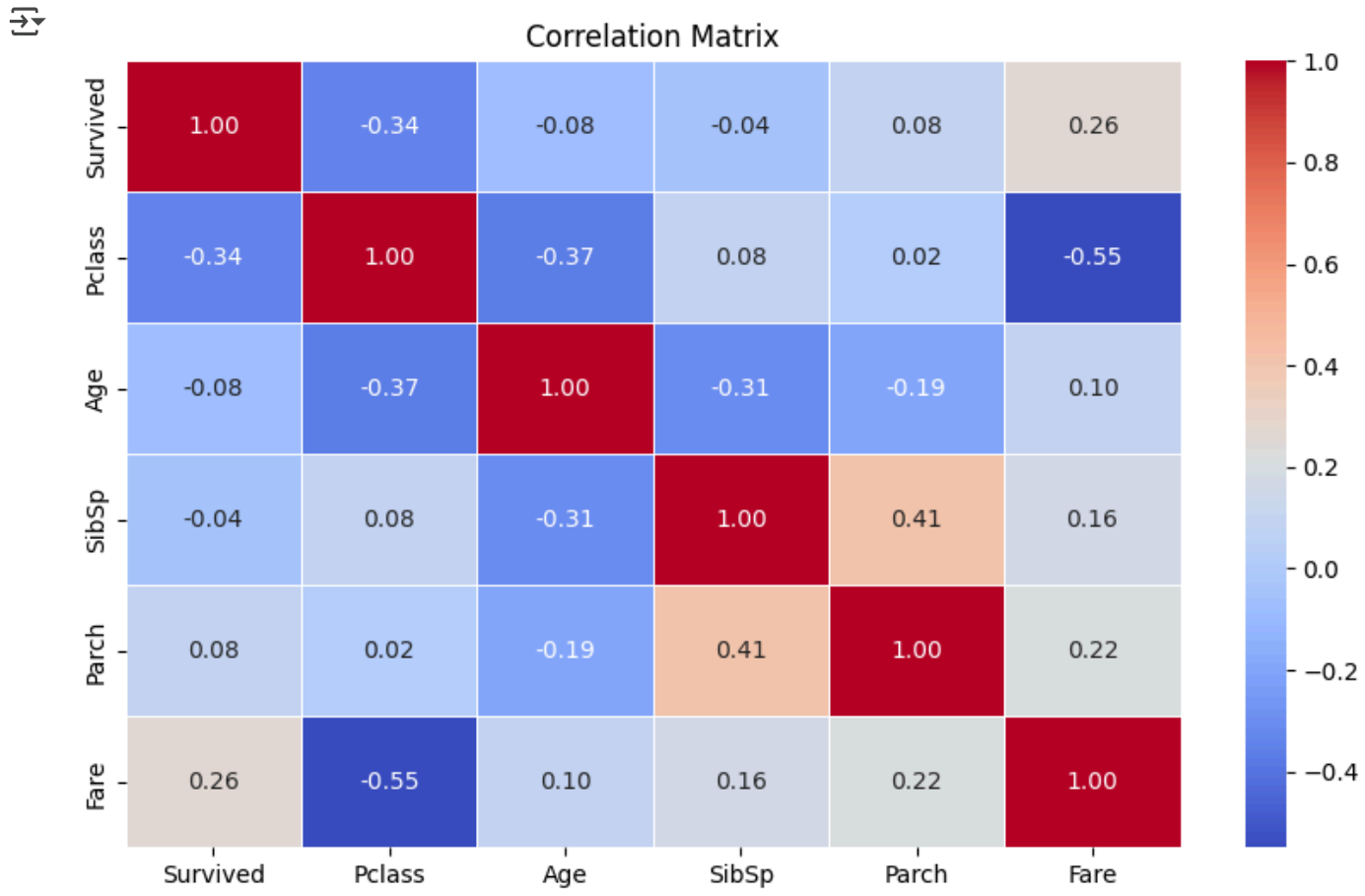

Boxplot of Fare




```
sns.pairplot(df[['Survived', 'Pclass', 'Age', 'SibSp', 'Parch', 'Fare']], hue='Survived', diag_kind=
plt.suptitle('Pairplot of Numeric Features by Survival', y=1.02)
plt.show()
```




```
plt.figure(figsize=(10, 6))
corr = df[['Survived', 'Pclass', 'Age', 'SibSp', 'Parch', 'Fare']].corr()
sns.heatmap(corr, annot=True, cmap='coolwarm', fmt='.2f', linewidths=0.5)
plt.title('Correlation Matrix')
plt.show()
```




```
sns.countplot(data=df, x='Survived')
plt.title('Survival Count')
plt.show()
sns.countplot(data=df, x='Sex', hue='Survived')
plt.title('Survival by Sex')
plt.show()
sns.countplot(data=df, x='Pclass', hue='Survived')
plt.title('Survival by Passenger Class')
plt.show()
sns.histplot(data=df, x='Age', hue='Survived', multiple='stack', bins=30)
plt.title('Age Distribution by Survival')
plt.show()
```