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TASK -02

```python
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

data = pd.read_csv(r"C:\Users\julug\Downloads\Titanic-Dataset.csv")

print("Summary Statistics:")
print(data.describe())
print("\nMedian values:")
print(data.median(numeric_only=True))

numeric_cols = data.select_dtypes(include=['int64', 'float64']).columns

for col in numeric_cols:

    plt.figure(figsize=(5, 3))
    plt.hist(data[col], bins=20, color='lightblue', edgecolor='black')
    plt.title(f'Histogram of {col}')
    plt.xlabel(col)
    plt.ylabel('Frequency')
    plt.tight_layout()
    plt.show()

    plt.figure(figsize=(5, 2))
    sns.boxplot(x=data[col], color='lightgreen')
    plt.title(f'Boxplot of {col}')
    plt.tight_layout()
    plt.show()

sns.pairplot(data[numeric_cols])
plt.suptitle("Pairplot of Numeric Features", y=1.02)
plt.show()

plt.figure(figsize=(10, 6))
sns.heatmap(data[numeric_cols].corr(), annot=True, cmap='coolwarm', fmt=".2f")
plt.title("Correlation Matrix")
plt.show()
```

OUTPUT:

```
Summary Statistics:
       PassengerId    Survived       Pclass         Age        SibSp  \
count   891.000000  891.000000   891.000000  714.000000   891.000000
mean    446.000000    0.383838     2.308642   29.699118     0.523008
std     257.353842    0.486592     0.836071   14.526497     1.102743
min       1.000000    0.000000     1.000000    0.420000     0.000000
25%     223.500000    0.000000     2.000000   20.125000     0.000000
50%     446.000000    0.000000     3.000000   28.000000     0.000000
75%     668.500000    1.000000     3.000000   38.000000     1.000000
max     891.000000    1.000000     3.000000   80.000000     8.000000

            Parch         Fare
count  891.000000   891.000000
mean     0.381594    32.204208
std      0.806057    49.693429
min      0.000000     0.000000
25%      0.000000     7.910400
50%      0.000000    14.454200
75%      0.000000    31.000000
max      6.000000   512.329200

Median values:
PassengerId    446.0000
Survived         0.0000
Pclass           3.0000
Age             28.0000
SibSp            0.0000
Parch            0.0000
Fare            14.4542
dtype: float64
```
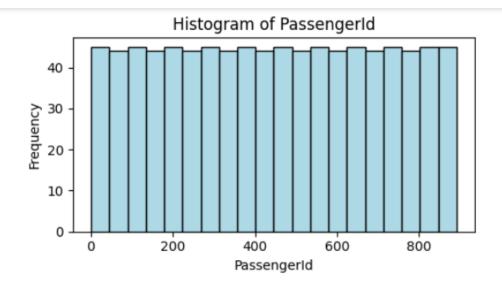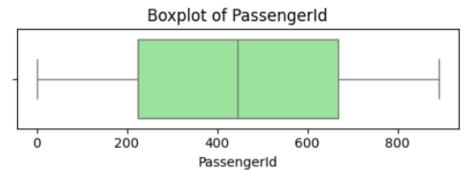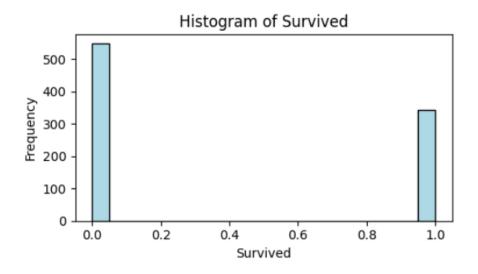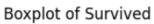
Histogram of PassengerId

Boxplot of PassengerId

Histogram of Survived

Boxplot of Survived

Histogram of Pclass

Boxplot of Pclass

Histogram of Age

Boxplot of Age

Histogram of SibSp

Boxplot of SibSp

Histogram of Parch

Boxplot of Parch

Histogram of Fare

Boxplot of Fare

Pairplot of Numeric Features

Correlation Matrix