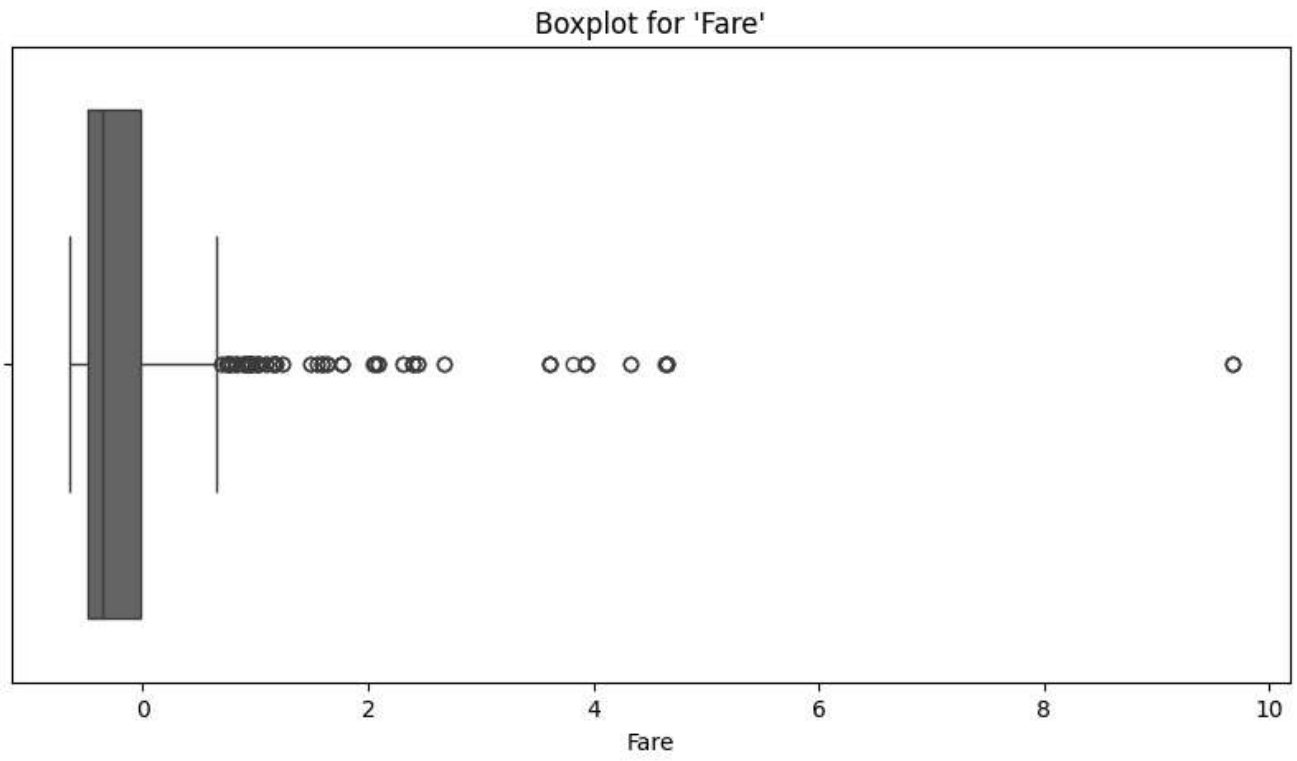
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.preprocessing import StandardScaler


df = pd.read_csv('/content/Titanic-Dataset.csv')


df['Age'].fillna(df['Age'].median(), inplace=True)
df['Fare'].fillna(df['Fare'].median(), inplace=True)
df['Embarked'].fillna(df['Embarked'].mode()[0], inplace=True)
```

```
<ipython-input-16-6e16b585ea01>:1: FutureWarning: A value is trying to
The behavior will change in pandas 3.0. This inplace method will never

For example, when doing 'df[col].method(value, inplace=True)', try usi


  df['Age'].fillna(df['Age'].median(), inplace=True)
<ipython-input-16-6e16b585ea01>:2: FutureWarning: A value is trying to
The behavior will change in pandas 3.0. This inplace method will never

For example, when doing 'df[col].method(value, inplace=True)', try usi


  df['Fare'].fillna(df['Fare'].median(), inplace=True)
<ipython-input-16-6e16b585ea01>:3: FutureWarning: A value is trying to
The behavior will change in pandas 3.0. This inplace method will never

For example, when doing 'df[col].method(value, inplace=True)', try usi


  df['Embarked'].fillna(df['Embarked'].mode()[0], inplace=True)
```

```
df['Sex'] = df['Sex'].map({'male': 0, 'female': 1})
df = pd.get_dummies(df, columns=['Embarked'], drop_first=True)


scaler = StandardScaler()
df[['Age', 'Fare']] = scaler.fit_transform(df[['Age', 'Fare']])
```

```
df[['Age', 'Fare']] = scaler.fit_transform(df[['Age', 'Fare']])


plt.figure(figsize=(10, 5))
sns.boxplot(x=df['Fare'])
plt.title("Boxplot for 'Fare'")
plt.show()
Q1 = df['Fare'].quantile(0.25)
Q3 = df['Fare'].quantile(0.75)
IQR = Q3 - Q1
lower_bound = Q1 - 1.5 * IQR
upper_bound = Q3 + 1.5 * IQR
df = df[(df['Fare'] >= lower_bound) & (df['Fare'] <= upper_bound)]
print("\nCleaned Dataset:")
print(df.head())
```



Cleaned Dataset:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp
0	1	0	3	Braund, Mr. Owen Harris	0	-0.565736	1
2	3	1	3	Heikkinen, Miss. Laina	1	-0.258337	0
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	1	0.433312	1
4	5	0	3	Allen, Mr. William Henry	0	0.433312	0
5	6	0	3	Moran, Mr. James	0	-0.104637	0

	Ticket	Fare	Cabin	Embarked_Q	Embarked_S
0	A/5 21171	-0.502445	NaN	False	True
2	STON/O2. 3101282	-0.488854	NaN	False	True
3	113803	0.420730	C123	False	True
4	373450	-0.486337	NaN	False	True
5	330877	-0.478116	NaN	True	False