

# Logistic Regression: Titanic Survival Prediction

## Dataset Overview

	PassengerId	Survived	Pclass	Name	Sex	Age	S
0	1	0	3	Braund, Mr. Owen Harris	male	22	
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Thayer)	female	38	
2	3	1	3	Heikkinen, Miss. Laina	female	26	
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35	
4	5	0	3	Allen, Mr. William Henry	male	35	

### Summary Statistics:

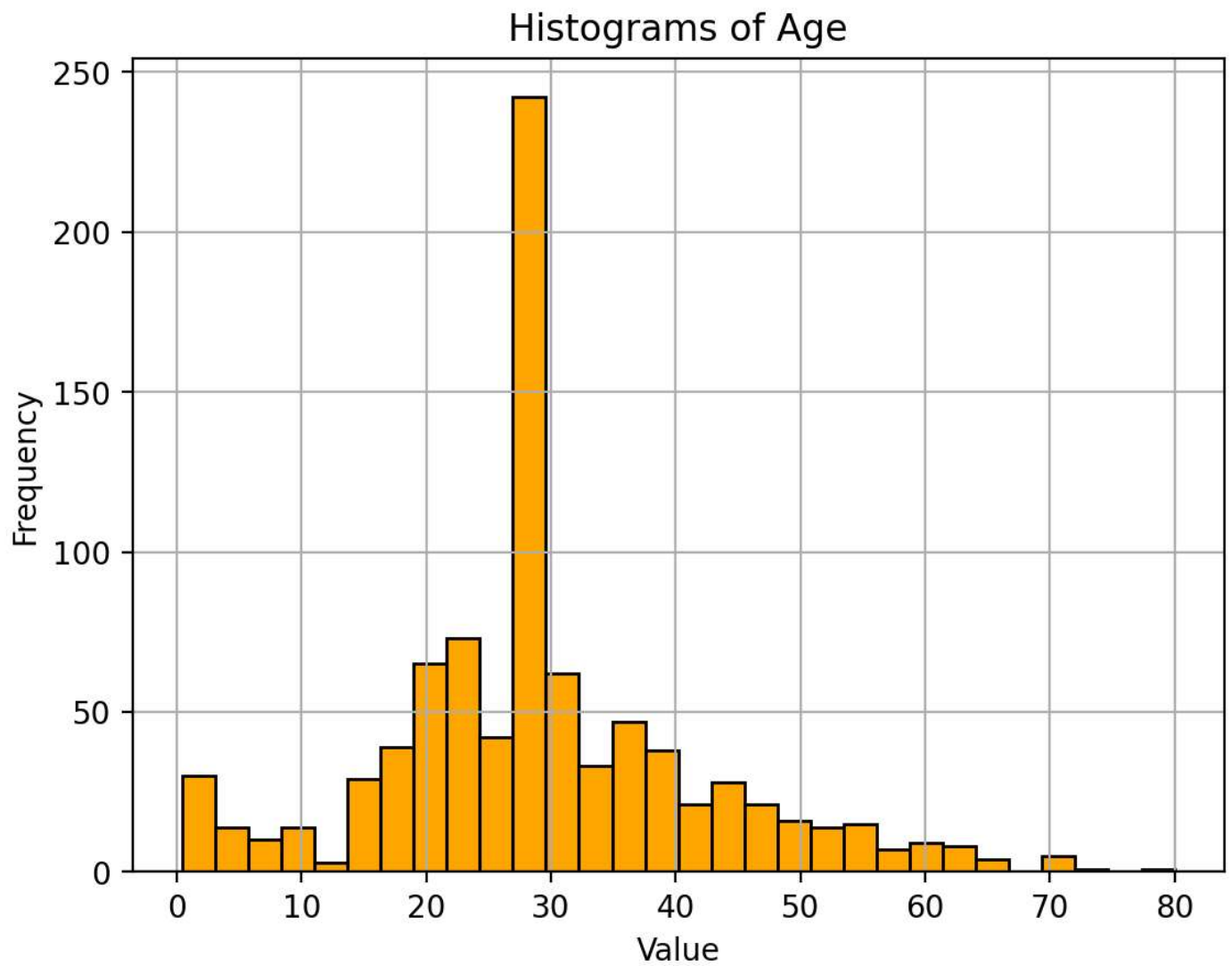
	PassengerId	Survived	Pclass	Age	SibSp	Parch	Fare
count	891	891	891	714	891	891	891
mean	446	0.3838	2.3086	29.6991	0.523	0.3816	32.2042
std	257.3538	0.4866	0.8361	14.5265	1.1027	0.8061	49.6934
min	1	0	1	0.42	0	0	0
25%	223.5	0	2	20.125	0	0	7.9104
50%	446	0	3	28	0	0	14.4542
75%	668.5	1	3	38	1	0	31
max	891	1	3	80	8	6	512.3292

### Missing Values:

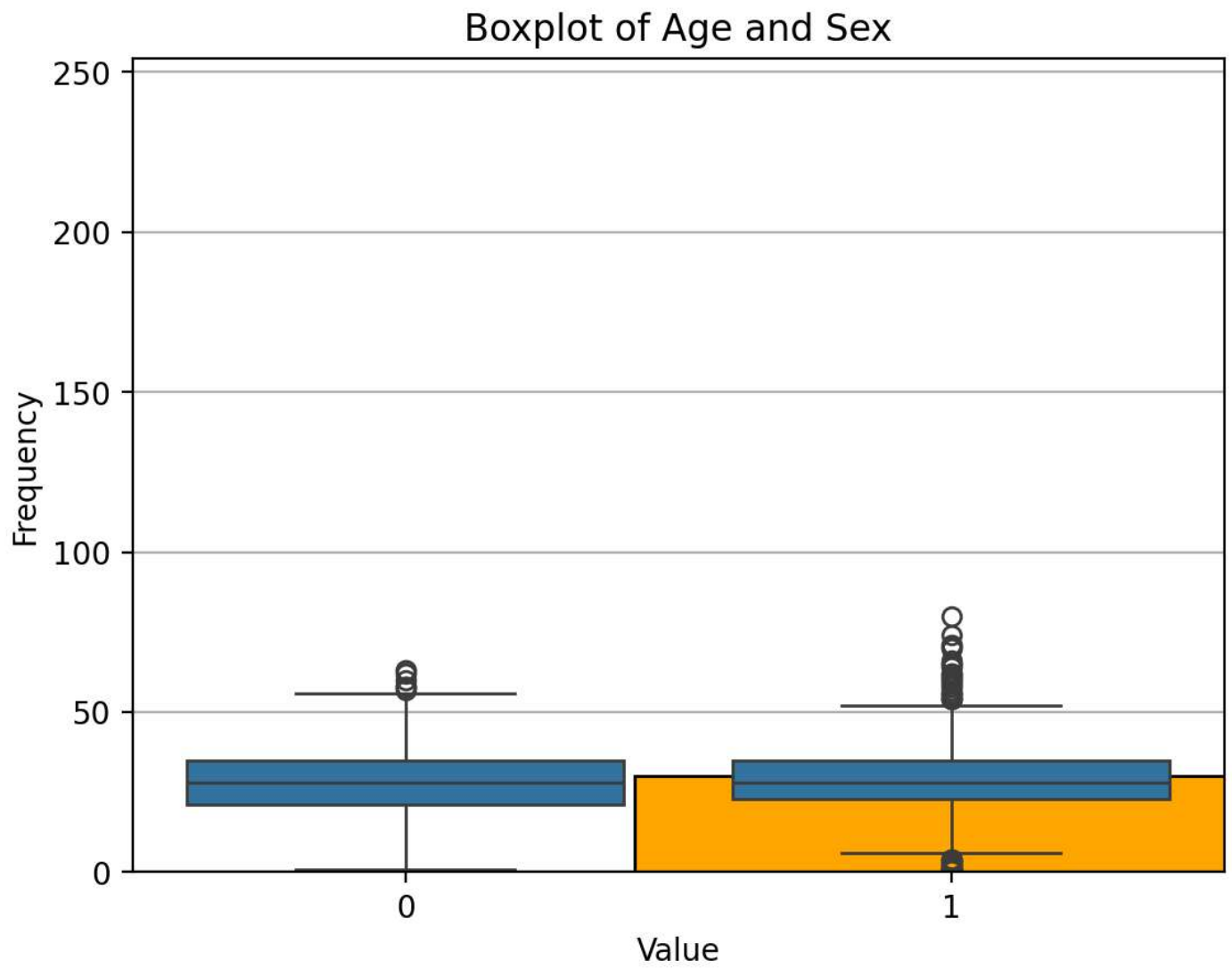
	0
PassengerId	0
Survived	0
Pclass	0
Name	0
Sex	0
Age	177
SibSp	0
Parch	0
Ticket	0
Fare	0

visualizations such as histograms, box plots, or pair plots to visualize the distributions and relationships between features.

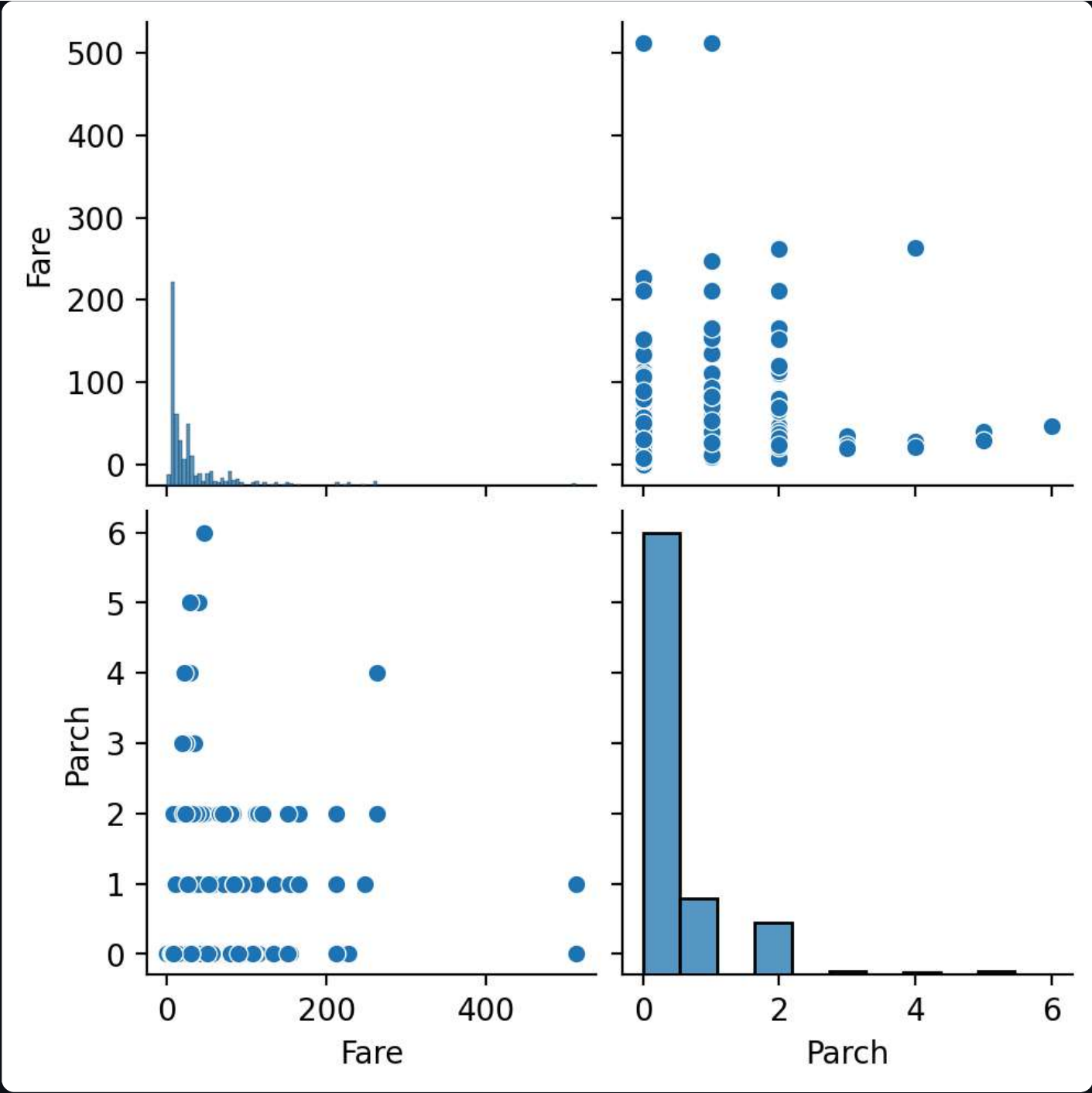
1.Histogram Chart



## 2.Box plot



### 3. Pair plot



# Model Evaluation

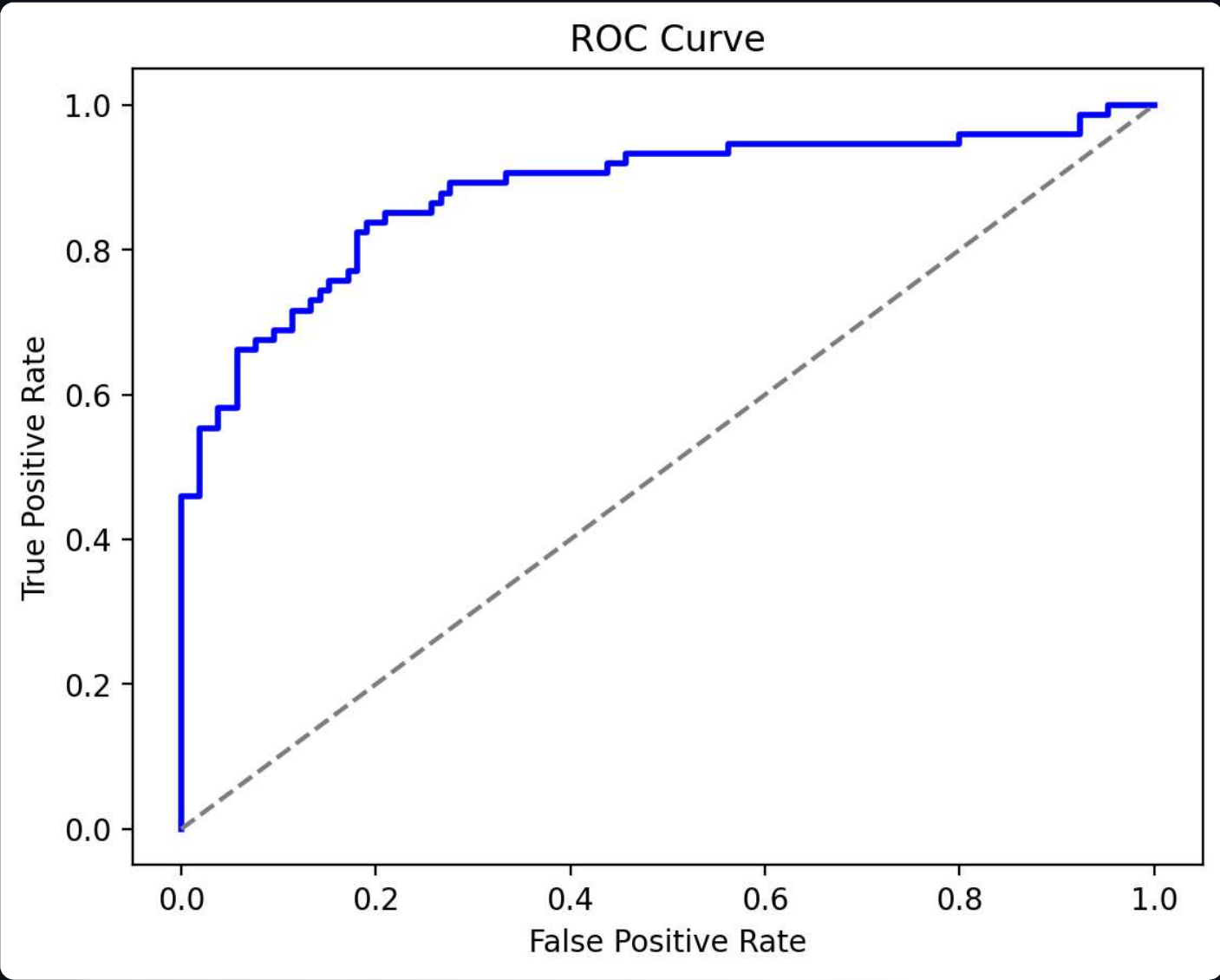
Accuracy: 0.8100558659217877

precision recall f1-score support

0	0.81	0.88	0.84	105
1	0.80	0.72	0.76	74
accuracy		0.81		179

macro avg   0.81   0.80   0.80   179  
weighted avg   0.81   0.81   0.81   179

ROC-AUC Score: 0.8801801801801802



# Make a Prediction

Passenger Class (1, 2, 3)

3

-

+

Age

30

-

+

Siblings/Spouses Aboard

1

-

+

Parents/Children Aboard

1

-

+

Fare

32.00

-

+

Sex

☐ Male

☒ Female

Predict Survival

Prediction: Survived