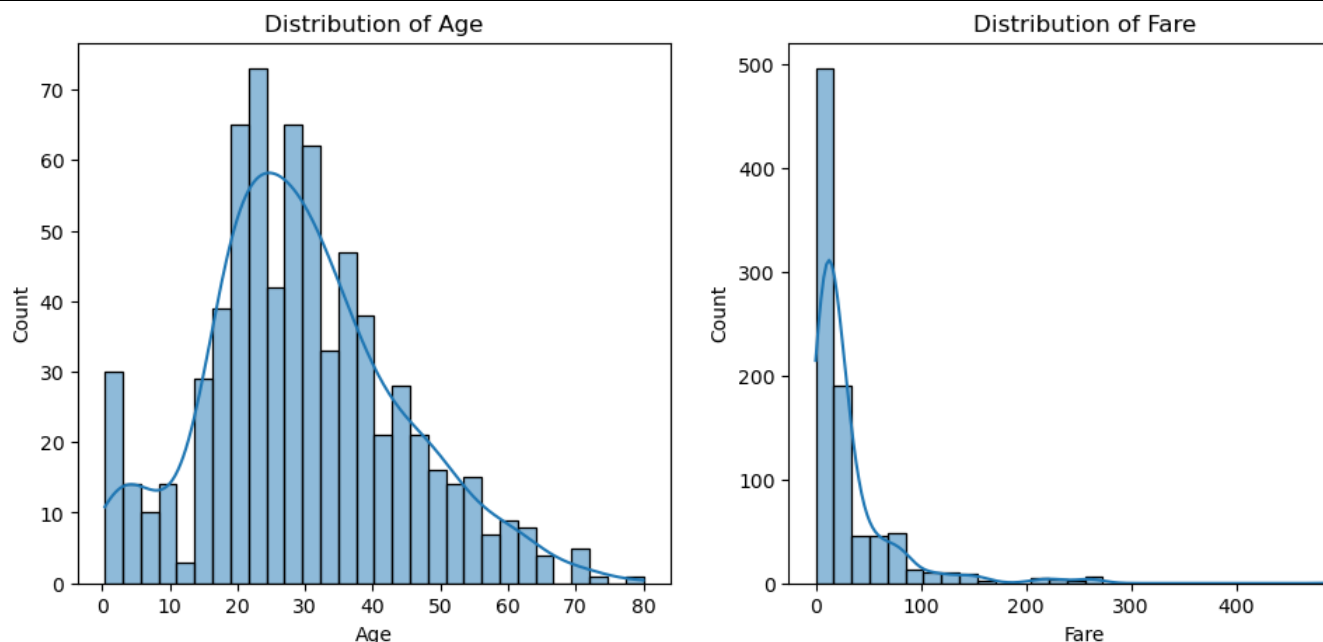


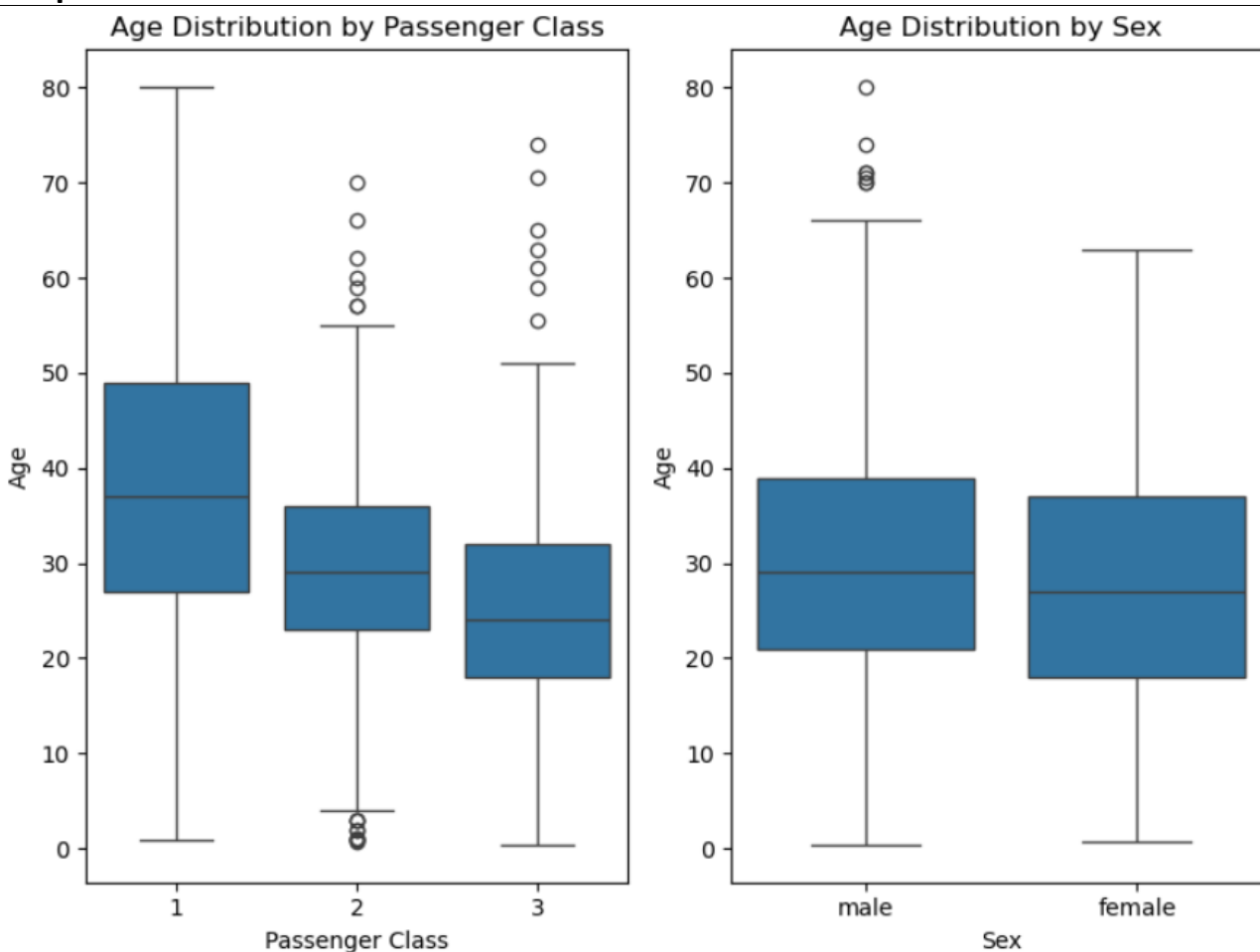
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	<div><div>--- Info --- &lt;class 'pandas.core.frame.DataFrame'&gt; RangeIndex: 891 entries, 0 to 890 Data columns (total 12 columns): #    Column            Non-Null Count    Dtype ---  -  -  -  -  -  -  -  -  -  -  -  - 0    PassengerId    891 non-null    int64 1    Survived       891 non-null    int64 2    Pclass         891 non-null    int64 3    Name           891 non-null    object 4    Sex            891 non-null    object 5    Age            714 non-null    float64 6    SibSp          891 non-null    int64 7    Parch          891 non-null    int64 8    Ticket        891 non-null    object 9    Fare           891 non-null    float64 10   Cabin         204 non-null    object 11   Embarked      889 non-null    object dtypes: float64(2), int64(5), object(5) memory usage: 83.7+ KB</div></div>																																																																																						
	<div><div>1. Age column has numbers of missing values</div><div>2. Cabin column has a very large number of missing values</div><div>3. Embarked has a few missing values.</div></div>																																																																																						
2	Describe																																																																																						
	<div><div>--- Describe ---</div><table><tr><td></td><td>PassengerId</td><td>Survived</td><td>Pclass</td><td>Age</td><td>SibSp \</td></tr><tr><td>count</td><td>891.000000</td><td>891.000000</td><td>891.000000</td><td>714.000000</td><td>891.000000</td></tr><tr><td>mean</td><td>446.000000</td><td>0.383838</td><td>2.308642</td><td>29.699118</td><td>0.523008</td></tr><tr><td>std</td><td>257.353842</td><td>0.486592</td><td>0.836071</td><td>14.526497</td><td>1.102743</td></tr><tr><td>min</td><td>1.000000</td><td>0.000000</td><td>1.000000</td><td>0.420000</td><td>0.000000</td></tr><tr><td>25%</td><td>223.500000</td><td>0.000000</td><td>2.000000</td><td>20.125000</td><td>0.000000</td></tr><tr><td>50%</td><td>446.000000</td><td>0.000000</td><td>3.000000</td><td>28.000000</td><td>0.000000</td></tr><tr><td>75%</td><td>668.500000</td><td>1.000000</td><td>3.000000</td><td>38.000000</td><td>1.000000</td></tr><tr><td>max</td><td>891.000000</td><td>1.000000</td><td>3.000000</td><td>80.000000</td><td>8.000000</td></tr></table> <table><tr><td></td><td>Parch</td><td>Fare</td></tr><tr><td>count</td><td>891.000000</td><td>891.000000</td></tr><tr><td>mean</td><td>0.381594</td><td>32.204208</td></tr><tr><td>std</td><td>0.806057</td><td>49.693429</td></tr><tr><td>min</td><td>0.000000</td><td>0.000000</td></tr><tr><td>25%</td><td>0.000000</td><td>7.910400</td></tr><tr><td>50%</td><td>0.000000</td><td>14.454200</td></tr><tr><td>75%</td><td>0.000000</td><td>31.000000</td></tr><tr><td>max</td><td>6.000000</td><td>512.329200</td></tr></table></div>							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
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	<div><div>1. The mean of Survived is approximately 0.38, indicating that about 38% of passengers survived.</div><div>2. The Age ranges from 0.42 (infant) to 80 years.</div><div>3. The Fare ranges from over 500 to 0.</div></div>																																																																																						

### 3 Histograms



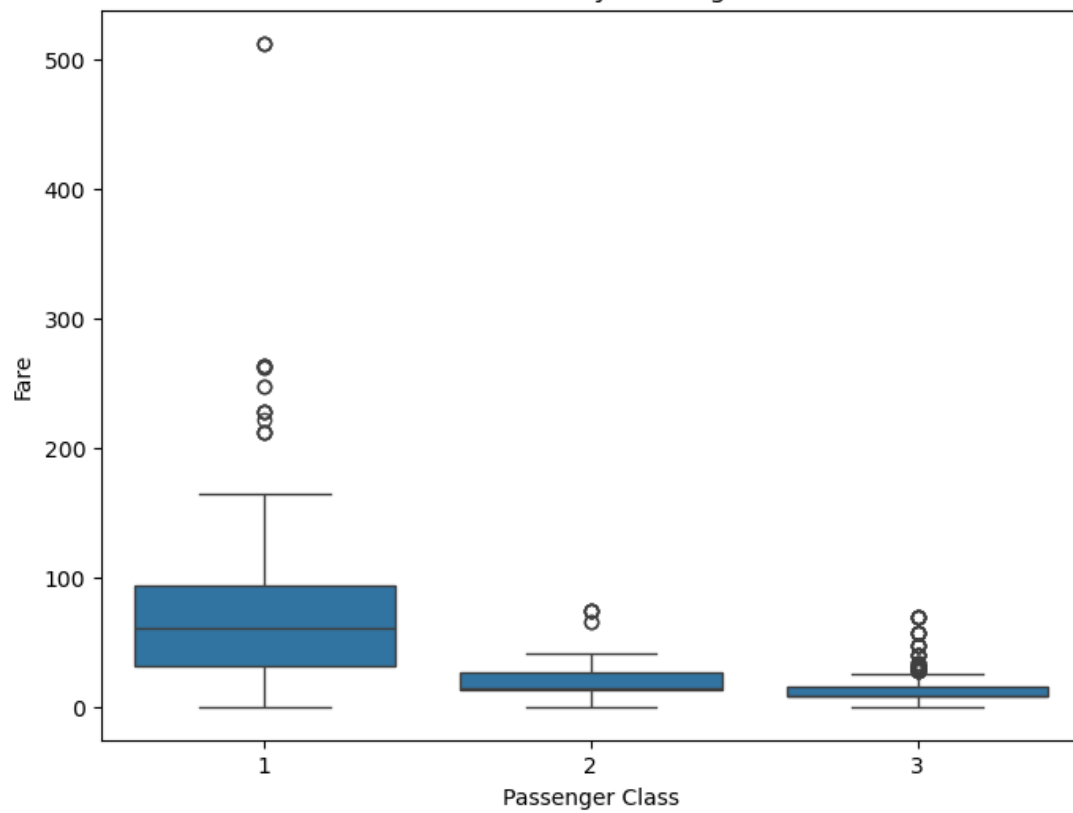
1. Age: The age distribution is right-skewed, peak in range (20-30s) fewer elderly passengers notable peak in very young children.
2. Fare: The fare distribution is highly right-skewed, most passengers paid lower fares few paid very high fares.

### 4 Boxplots



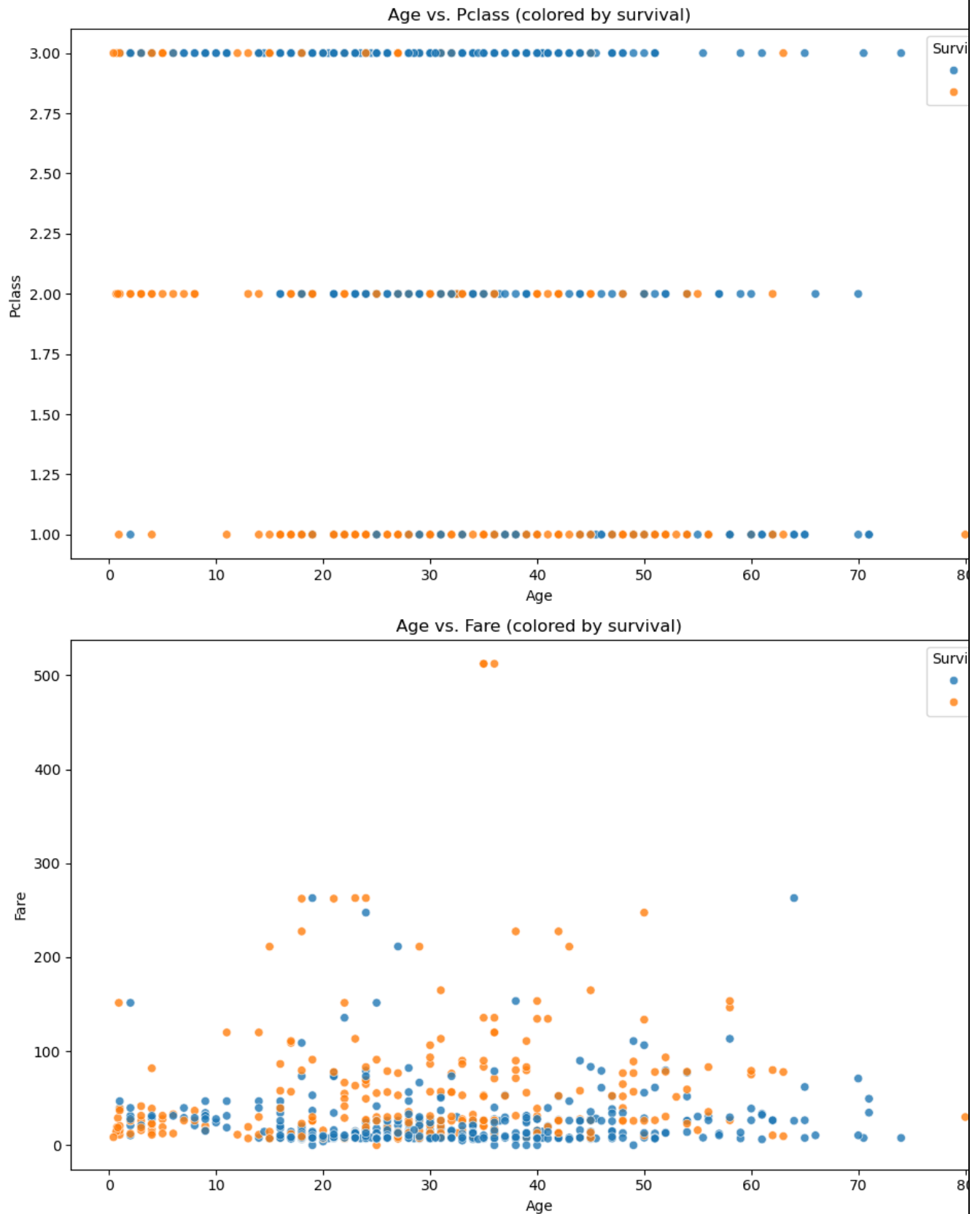
1. Age by Pclass: Passengers in lower classes (2nd and 3rd) have a slightly lower median age than those in 1st class. There are more outliers in the age distribution.
2. Age by Sex: The median age for males and females appears to be similar.

Fare Distribution by Passenger Class



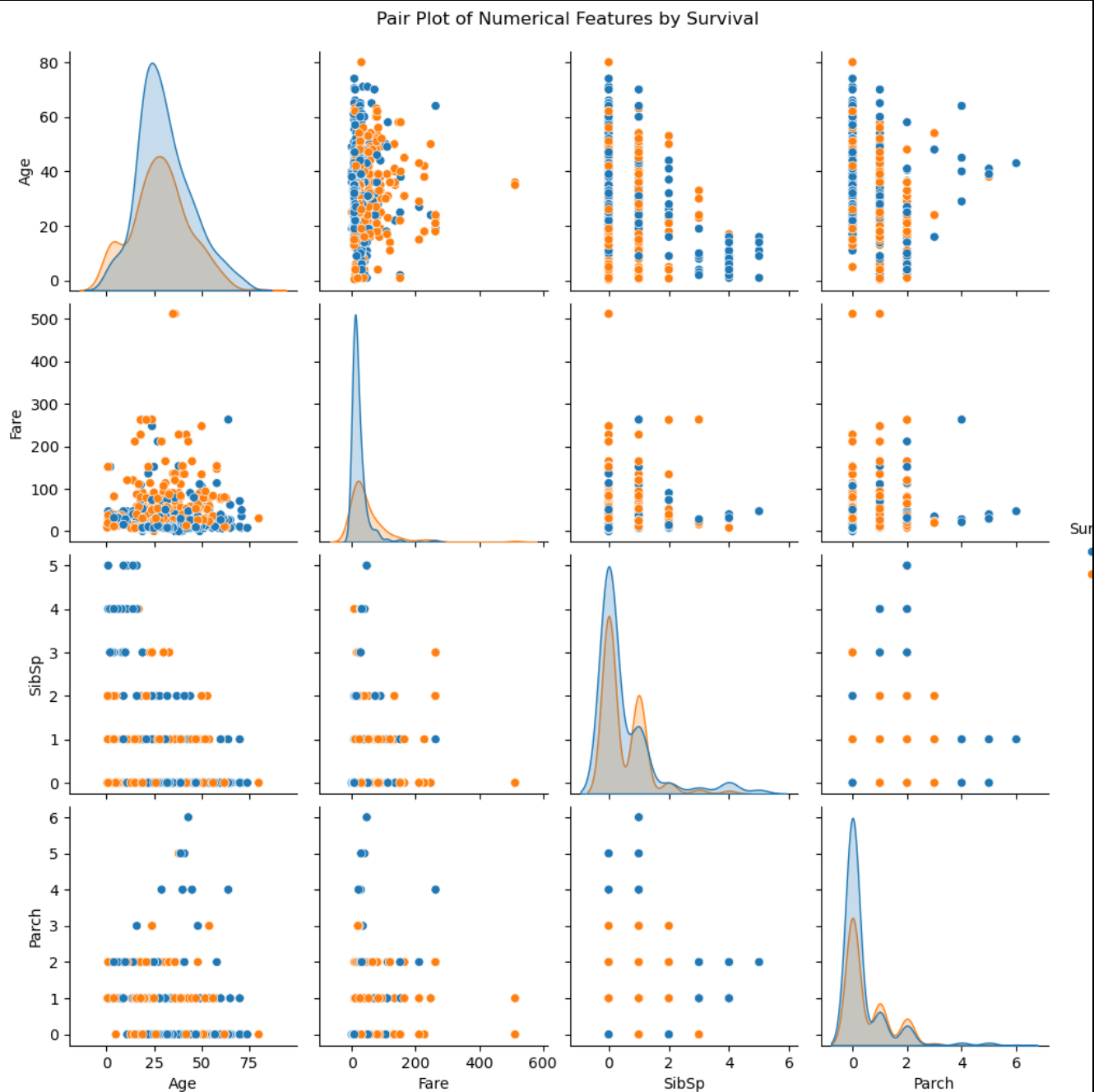
1. Fare by Pclass: This shows, 1st class passengers paid significantly higher fares than 2nd and 3rd class passengers. 2nd class fares are higher than 3rd class fares.

## 5 Scatterplots

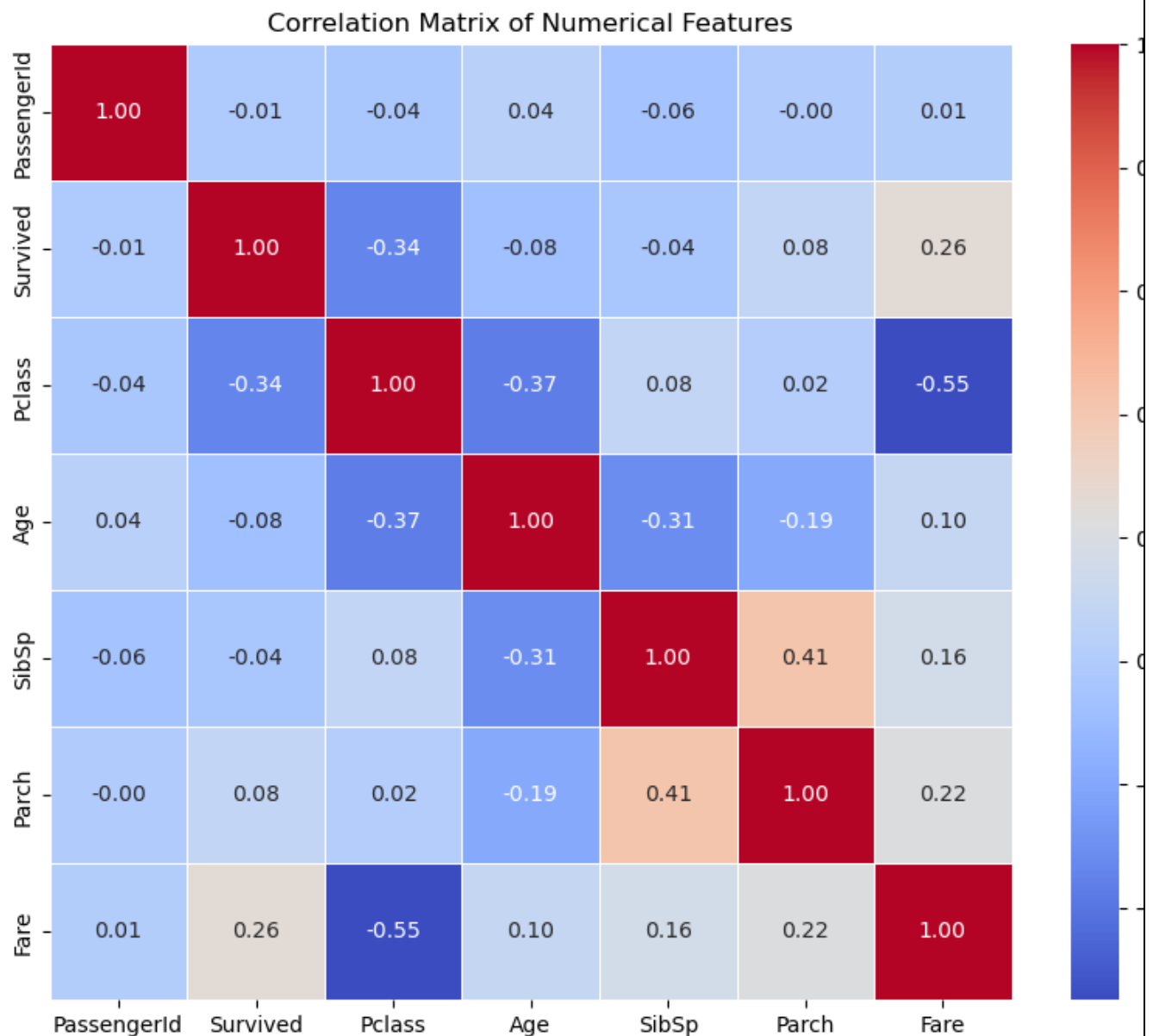


1. There isn't a very strong linear relationship between Age and Fare.
2. Young children have a higher survival rate.
3. Survival rate is highest in 1st class.

## 6 Pairplot



## 7 Heatmap



1. Fare and Pclass:  
strong negative correlation (-0.55).  
indicating that as the passenger class increases, the Fare decreases.
2. Parch and SibSp:  
moderate positive correlation (0.41)  
indicating that people with more siblings/spouses also tend to have more parents/children abroad.
3. Survived and Fare:  
positive correlation (0.26)  
Higher Fare is associated with higher survival rates.
4. Other correlations are relatively weak. Age doesn't have a very strong linear correlation with Survived or Fare.

## B Summary of findings

1. Age, Cabin, and Embarked have missing values.
2. Majority of passengers paid lower fares( skewed distribution towards cheaper tickets)
3. The age distribution shows a concentration of young adults (20s-30s)
4. There were more male passengers than female passengers.
5. The majority of passengers were in 3rd class.
6. Passengers in 1st class had a significantly higher survival rate compared to 2nd and 3rd class passengers
7. Higher fares are generally associated with higher survival rates
8. Most passengers traveled alone or with very few family members