A graph of age distribution

AI-generated content may be incorrect.

- The Age distribution is slightly right-skewed.

- Most passengers are between 20–40 years old.

A graph of a number of boxes

AI-generated content may be incorrect.

 First-class passengers tend to be older on average.

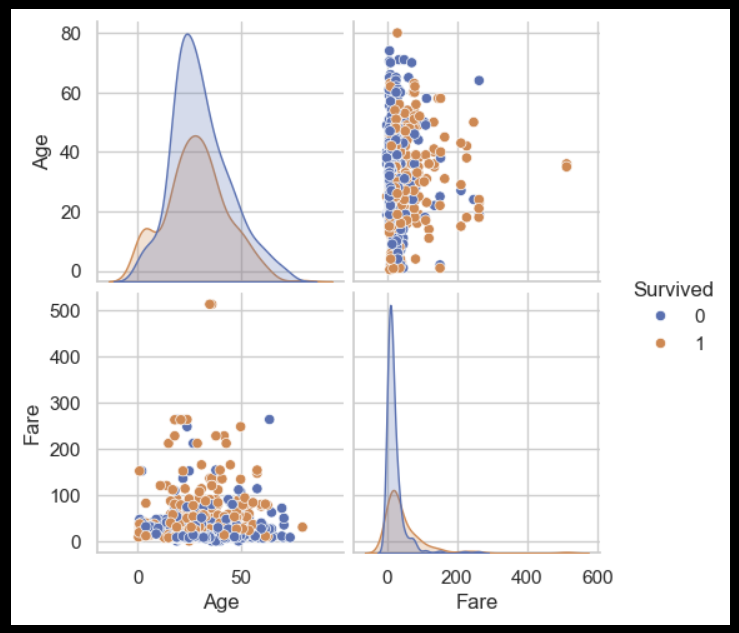
- Third-class passengers show a wider spread in age distribution.

A graph with blue and orange dots

AI-generated content may be incorrect.

- Higher fares seem to be associated with higher survival.

- Younger passengers are spread across all fare ranges.



- There is a visible separation in Fare for survivors vs non-survivors.

A screenshot of a graph

AI-generated content may be incorrect.

- Fare has a moderate positive correlation with Survival.

- Pclass has a negative correlation with Survival.

A graph of survival count by gender

AI-generated content may be incorrect.

- Females had a much higher survival rate compared to males.

**Key Insights**

1. **Age Distribution**
   * The age distribution is **slightly right-skewed**, indicating more younger passengers and fewer older ones.
   * The majority of passengers were between **20–40 years old**, suggesting a relatively young demographic on board.
2. **Age by Passenger Class**
   * **First-class passengers** tended to be older on average, potentially reflecting higher financial stability among older travelers.
   * **Third-class passengers** displayed a **wider spread in age**, with a notable number of younger individuals and children.
3. **Fare vs. Survival**
   * Higher ticket fares were **positively associated with survival**.
   * This suggests that passengers in higher fare brackets (often first-class) had better access to lifeboats and safety measures.
4. **Age vs. Fare by Survival**
   * A visible separation in fare values was observed between survivors and non-survivors.
   * Younger passengers were present across all fare ranges, but survival chances increased significantly for higher fares.
5. **Correlation Analysis**
   * **Fare** showed a **moderate positive correlation** with survival, reinforcing the advantage of higher-class travel.
   * **Pclass** (passenger class) had a **negative correlation** with survival — lower classes had poorer survival rates.
6. **Gender and Survival**
   * **Females had a substantially higher survival rate** compared to males.
   * This aligns with the "women and children first" evacuation principle historically applied during the Titanic disaster.

**Summary Statement**:  
The analysis indicates that **social class, fare amount, and gender** were critical factors influencing survival rates on the Titanic. First-class passengers, females, and those who paid higher fares had a distinct survival advantage. Age showed a subtle influence, with younger passengers faring slightly better.