**Relationships & Trends**

**1. Survival vs. Pclass**

* **Trend:** Higher-class passengers (Pclass = 1) had higher survival rates.
* **Insight:** Wealthier individuals had better access to lifeboats or priority.

**2. Survival vs. Sex**

* **Trend:** Females survived in greater numbers than males.
* **Value Counts:**
  + Sex = male → majority did **not** survive.
  + Sex = female → majority **did** survive.
* **Insight:** The "women and children first" protocol likely played a role.

**3. Survival vs. Age**

* **Trend:** Very young children and young adults had higher survival rates.
* **Outliers:** Elderly survival was low.
* **Insight:** Younger people may have been prioritized or more agile in emergencies.

**4. Survival vs. Fare**

* **Trend:** Higher fares (wealthier passengers) were associated with better survival rates.
* **Correlation:** Positive correlation between Fare and Survived.

**5. Survival vs. Family (SibSp & Parch)**

* **Trend:**
  + People with **small families** (1–2 members) had higher survival rates.
  + **Alone or very large families** had lower chances.
* **Insight:** Having 1–2 relatives may have helped without hindering evacuation.

**6. Pclass vs. Fare**

* **Trend:** Strong negative correlation (~ -0.55).
* **Insight:** 1st class passengers paid significantly more than 3rd class.

**7. Age vs. Fare**

* **Trend:** Weak or no clear trend.
* **Insight:** All age groups had a range of fares—some children were in 1st class.

**📈 Summary Table (Correlations)**

| **Feature Pair** | **Correlation** | **Insight** |
| --- | --- | --- |
| Survived vs Pclass | -0.33 | Higher class → higher survival |
| Survived vs Fare | +0.26 | Higher fare → higher survival |
| SibSp vs Parch | +0.41 | Families traveled together |
| Age vs Fare | ~0.18 | Slight increase in fare with age |