

# Titanic Dataset Dashboard - EDA

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This document presents a set of analytical questions and corresponding insights based on the visual and statistical analysis of the Titanic dataset. The purpose is to guide understanding and interpretation of the dashboard created from exploratory data analysis (EDA).

## 1. What is the size and structure of the dataset?

The dataset contains 891 rows and 12 columns. It includes passenger information such as name, age, sex, ticket class, and survival status.

## 2. Are there any missing values in the dataset?

Yes. The 'Age' and 'Embarked' columns have missing values, while over 70% of the values in the 'Cabin' column are missing, leading to its removal.

## 3. What types of features are present in the dataset?

The dataset contains both numerical (e.g., Age, Fare) and categorical (e.g., Sex, Embarked) features. Some features needed type correction for analysis.

## 4. How does gender affect survival rate?

A significantly higher percentage of females survived compared to males. This indicates that women were prioritized during rescue operations.

## 5. What is the age distribution of passengers?

The age distribution is right-skewed with most passengers aged between 20 and 40. Missing values in age were filled using the mean strategy.

## 6. Does passenger class affect the likelihood of survival?

Yes. First class passengers had a much higher survival rate compared to those in third class.

## 7. Were there any correlations found among variables?

Strong correlation observed between Pclass and Fare (negatively correlated) and between Sex and Survival (positively correlated for females).

## 8. What was the distribution of embarked locations?

Most passengers embarked from 'S' (Southampton). A few missing values in 'Embarked' were filled using the mode.

## Drawing Conclusions

1. Chance of female survival is higher than male survival
2. Travelling in Pclass 3 was deadliest
3. Somehow, people going to C survived more
4. People in the age range of 20 to 40 had a higher chance of not surviving
5. People travelling with smaller families had a higher chance of surviving the accident in comparison to people with large families and travelling alone