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## **Titanic – Machine Learning From Disaster**

## **Problem Statement:**

The sinking of the Titanic is one of the most tragic maritime disasters in history, resulting in the loss of over 1,500 lives. Despite being deemed "unsinkable," the RMS Titanic collided with an iceberg on April 15, 1912, during its maiden voyage. The lack of lifeboats meant that many passengers and crew perished in the icy waters of the North Atlantic.

In this challenge, the task is to build a predictive model to determine which passengers were more likely to survive the disaster. The dataset provided contains information about passengers' attributes such as their age, gender, socio-economic class, and family relations. By analyzing this data and constructing a predictive model, we aim to uncover patterns and factors that influenced the likelihood of survival.

## **Importance of the Project:**

Understanding the factors that contributed to survival on the Titanic is not only historically significant but also relevant for informing safety protocols in modern maritime travel. By developing a predictive model, we can gain insights into the socio-economic and demographic characteristics that played a role in determining survival outcomes. This project serves as an opportunity to apply machine learning techniques to real-world data, honing skills in data analysis, feature engineering, and predictive modeling. Ultimately, the aim is to create a tool that can assist in understanding and potentially mitigating the risks associated with maritime disasters.