Your First Exploratory Data Analysis (EDA) Project: A Step-by-Step Guide

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Project: Investigating the Titanic Disaster

Our Goal: We are going to analyze data from the passengers on the Titanic. Our mission is to explore the data to find patterns and clues about who was more likely to survive the famous shipwreck.

Our Tools:

Python: Our programming language. Pandas: A powerful library, like a magical, super-smart spreadsheet for Python. It helps us organize, clean, and manipulate data. NumPy: A library that is the master of mathematical calculations, especially with lists of numbers. Pandas actually uses it behind the scenes! Matplotlib: Our artist. This library helps us draw charts and graphs to visualize our findings.

Part 1: Setting Up Your Workshop

Before a detective starts investigating, they need their tools ready. We'll do the same. Get a Notebook: The best way to do data analysis is in a "notebook" environment. It lets you write code and see the results immediately. I highly recommend using Google Colab. It's free, online, and has everything we need pre-installed. Just go to colab.research.google.com. Install Libraries (If not using Colab): If you are running Python on your own computer, you might need to install these libraries. Open your terminal or command prompt and type:

```
pip install pandas numpy matplotlib
```