CLA-1: Graded Power BI Project Report

📊 OTT Platform Analytics Report

📌 Project Overview

This report provides an in-depth analysis of an OTT platform dataset using Power BI. The primary objective is to visualize key business metrics and derive meaningful insights that can help in strategic decision-making. The project involves data transformation, dashboard creation, and business insights extraction to understand revenue patterns, genre popularity, and performance metrics of movies and shows.

🎯 Learning Objectives

- 🔄 Data Transformation: Cleaning and structuring the dataset for better usability.
- 📈 Dashboard Development: Designing interactive and insightful Power BI dashboards.
- 💡 Business Insights: Interpreting data trends for decision-making in the OTT

📂 Dataset Variables

The dataset consists of the following key variables:

- 🎬 Title: Movie/Show name
- 📅 Date: Release date
- 🎭 Genre: Type of content
- 🗣️‼️ orig_lang: Original language of the content
- 💰 Revenue($): Earnings generated
- 🎥 Budget($): Production cost
- 🌍 Country: Country of release
- ⭐ Score: Audience/critic rating

🛠️‼️ Tasks & Analysis

1. 🔧 Data Transformation (40%)

Data transformation techniques were applied to clean and structure the dataset effectively:

- 🧹 Handling Missing and Duplicate Values: Missing values were identified and treated using appropriate techniques (e.g., imputation or removal based on relevance). Duplicate records were removed to maintain data integrity.
- 📅 Date Formatting: The release date was converted into a proper date format, and new fields such as Year and Month were extracted for trend analysis.
- 🧮 Calculated Fields:
  - 📊 Profit = Revenue - Budget
  - 📊 ROI (%) = (Profit / Budget) * 100
- 🎞️‼️ Movie Categorization Based on Score:
  - 🟢 High: Score ≥7
  - 🟡 Medium: Score between 4 and 7
  - 🔴 Low: Score <4

2. 🔗 Building Relationships Between Tables (New Section)

Power BI enables seamless data integration by creating relationships between different tables and datasets. In this project, relationships were established to enhance data connectivity and enable deeper insights.

- 📌 Primary & Foreign Key Relationships:
  - The **Movie ID** column was used as the primary key to connect different datasets.
  - Relationships were built between **Genre**, **Country**, and **Revenue Data** tables for accurate cross-referencing.
- 🔍 One-to-Many Relationships:
  - A one-to-many relationship was set up between the **Movie Table** and **Revenue Table**, ensuring each movie's earnings were correctly mapped.

    - Another one-to-many relationship linked **Country Table** to the main dataset to analyze revenue by country.
- 🔗 Data Model Optimization:
    - Redundant columns were removed to improve performance.
    - Lookups were optimized to avoid circular dependencies.

3. 📊 Dashboard Development (40%)

A Power BI dashboard was designed with the following visualizations:

- 📊 Bar Chart: Revenue vs. Budget Analysis to identify the most profitable genres.
- 🥧 Pie Chart: Distribution of genres to visualize content popularity.
- 📌 KPI Cards: Displayed key performance indicators such as:
    - 💵 Total Revenue
    - 🎥 Total Budget
    - ⭐ Average Score
    - 📈 ROI (%).
- 🌍 Top 5 Countries by Revenue: A visualization showing the highest revenue-generating countries.
- 🎭 Genre-wise Popularity Analysis: Implemented a dynamic slicer to filter data by genre.
- 🏆 Highest Grossing Movies: Displayed the top revenue-generating movies with conditional formatting to highlight the most profitable ones.

4. 📜 Business Insights Report (20%)

The analysis of the dashboard led to the following key insights:

- 💰 Most Profitable Genre: The most profitable genre based on ROI and revenue was identified. This helps in determining which content categories should be
- 🌍 Country Trends: Certain countries consistently generated higher revenue, suggesting better audience engagement in those markets.
- 🗣️‼️ Language Influence: Original language played a crucial role in content performance. Movies in specific languages had higher revenue and audience ratings.
- 🎬 Budget vs. Revenue: High-budget movies did not always yield high profits, emphasizing the need for efficient budgeting.

📢 Strategic Recommendations

Based on the findings, the following recommendations are suggested:

1. 🎭 Focus on High-Performing Genres: Invest in genres that have demonstrated consistent profitability.
2. 💰 Optimize Budget Allocation: Avoid over-investing in projects with a low return on investment.
3. 🌍 Target High-Revenue Countries: Expand marketing efforts in countries with strong revenue potential.
4. ⭐ Leverage Audience Ratings: Consider viewer feedback and ratings while selecting content for production.

☑️ Conclusion

This Power BI project successfully transformed raw OTT platform data into meaningful business insights. The integration of structured data relationships enhanced the accuracy of the analysis, while the dashboard provided valuable metrics to aid in decision-making. The insights derived highlight key areas for strategic improvements. By leveraging these insights, OTT platforms can optimize their content strategies, budget allocation, and audience targeting for improved business performance. 🚀