# 📊 IMDB Movie Analysis – Excel and Power BI Project

## 📌 Project Overview

This project explores the IMDb top movies dataset to understand audience preferences and industry trends over time. It provides a comprehensive analysis of the factors that lead to higher ratings and greater commercial success. The goal of this project is to transform raw data into meaningful insights through interactive visualizations and dashboards. The dataset was cleaned using Excel and Power Query, and interactive visualizations were created in Power BI to transform raw data into meaningful insights.

## 🎯 Objectives

- Analyze the top IMDb movies based on IMDb scores and ratings

- Identify movie trends over the years

- Explore genre and rating patterns

- Perform country-wise movie release analysis

- Build an interactive dashboard for insights

## 🛠️ Tools & Technologies Used

- Microsoft Excel – Data cleaning and preprocessing

- Power Query – Data transformation

- Power BI Desktop – Data modeling and visualization

## 📁 Dataset Information

- Total Records: 5043 Movies

- Key Columns:

  - Movie Title
  - Title Year
  - Genre
  - Director Name
  - Language
  - Budget
  - Gross Revenue
  - IMDb Rating
  - Duration
  - Content Rating

🔄 Data Cleaning & Preparation (Excel)

- Assigned appropriate data types to all columns

- Removed unnecessary columns and empty rows

- Trimmed and cleaned text fields for consistency

- Corrected a small number of records where data entries were misaligned in the source data

- Handled missing values

- Split the imdb link column into:

  - Imdb link

  - Imdb id

- Standardized categorical fields such as duration, gross and budget

- Checked for duplicate records and verified data integrity

📊 Power BI Data Modeling

- Imported cleaned dataset into Power BI

- Verified data types for accurate analysis

- Used built-in aggregation features for visualization

📈 Dashboard Features The interactive Power BI dashboard includes:

- KPI cards showing total number of movies, average imdb score, total gross, total votes, total budget and total number of geners

- Area chart for showing total count of movies by country

- Column charts showing relation between imdb score and gross value

- Pie charts used for showing total movies in each language

- Slicers for filtering by country, language, year, content rating and display

👉 Download Full Dashboard: (IMDB Movie Report.pdf)

🔍 Key Insights

- Specific genres (e.g., Action, Sci-Fi) often dominate high-rating, high-revenue categories.

- A correlation exists between specific movie durations and audience scores.

- Higher budgets do not always guarantee higher IMDb scores, but often correlate with higher gross revenue.

- Most of the movies released from USA and most of them in English Language

- There is an increase in the number of movie releases after 2000

📁 Repository Contents

• movie_metadata.csv – Original uncleaned dataset

• movie_metadata.xlsx – Cleaned dataset

• IMDB Movie Report.pbix – Power BI dashboard file.

• IMDB Movies_Project_Documentation.pdf – Project documentation.

🚀 How to Use

- Download the dataset file to view cleaned data

- Open the .pbix file using Power BI Desktop

- Use slicers in the dashboard to explore insights interactively

💡 Skills Demonstrated

- Data Cleaning & Preparation

- Data Transformation

- Data Modeling

- Data Visualization

- Dashboard Design

- Analytical Thinking

👤 Author

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