

# **Amazon Prime Video Analysis – Project Report**

## **1. Project Title**

Amazon Prime Video Content Analysis using Power BI

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## **2. Author**

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## **3. Project Summary**

This project focuses on analyzing Amazon Prime Video's content library using Power BI. The dataset includes information about movies and TV shows such as titles, genres, ratings, directors, release years, and content types. Using Power BI, Excel, and Power Query Editor, the data was cleaned, transformed, and visualized to extract valuable insights regarding content distribution, rating trends, genre preferences, and historical release patterns. The goal of the project is to demonstrate a complete analytics workflow—from raw data to insights—using industry-relevant BI tools.

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## **4. Objective**

- To analyze Amazon Prime Video content data and identify key patterns.
  - To build an interactive Power BI dashboard with advanced KPIs and visualizations.
  - To study content distribution by genre, ratings, release years, and geographical regions.
  - To compare movies vs TV shows and understand which content type dominates the platform.
  - To extract insights that support content strategy and user preference understanding.
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## 5. Data Overview

- File: amazon\_prime\_titles.csv
  - Size: 9669 rows across 12 columns
  - Key columns: Title, Genre, Director, Ratings
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## 6. Tools and Technologies used

- **Power BI Desktop** – Main tool for visualization and dashboard creation.
  - **Power Query Editor** – For data cleaning and transformation.
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## 7. Process

- Data Collection
- Data Cleaning
- Data Transformation
- KPI Creation
- Visualization(PowerBI)
- Insight Extraction

## 8. KPIs (Key Performance Indicators)

The dashboard includes the following KPIs:

- Total Titles
- Total Ratings
- Total Genres
- Total Directors
- Start Date of Content Release
- End Date of Content Release

These KPIs provide a quick snapshot of content availability and diversity on the platform.

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## 9. Visualizations Used

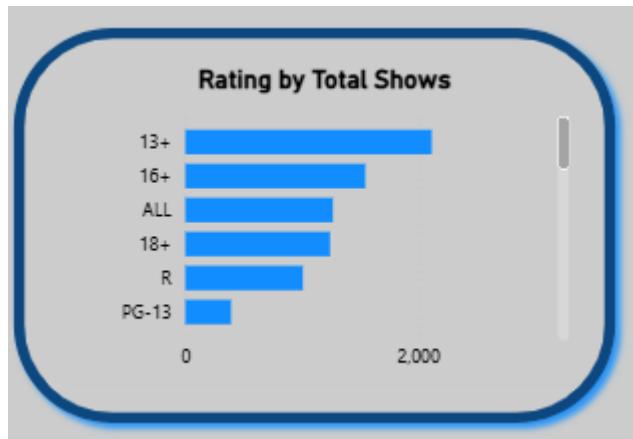
### 1. Total Shows on World Map

This map visual displays the **global distribution of titles**, showing which regions have contributed the most content. It helps identify geographic patterns and understand country-level or continent-level content availability.



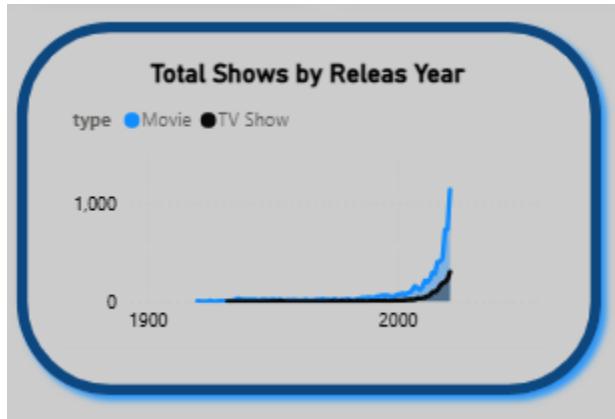
### 2. Rating by Total Shows(Bar Chart)

This bar chart presents the **distribution of titles across rating categories** such as PG, 13+, 16+, etc. It helps analyze how much content is suitable for different age groups and provides insight into audience coverage.



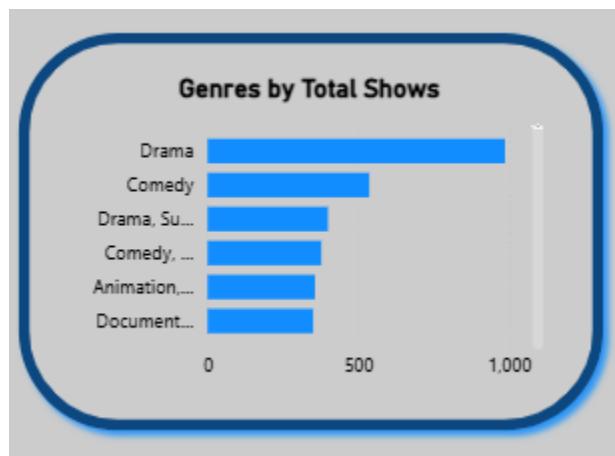
### 3. Total Shows by Release Year (Line Chart)

This trend line shows how content production has changed over time. The visual reveals a gradual rise in content until the early 2000s, followed by a steep increase, indicating rapid expansion in media production in recent years



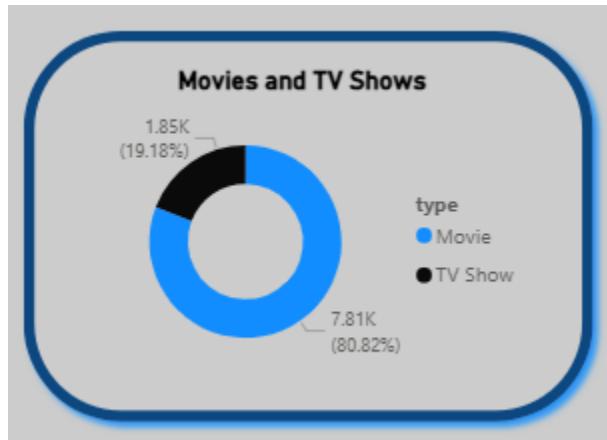
### 4. Genres by Total Shows (Bar Chart)

This chart highlights the most popular genres based on total show count. Drama and Comedy appear as the leading genres, indicating strong audience demand for story-driven and entertainment-focused content.



### 5. Movies vs TV Shows (Donut Chart)

This donut chart compares the number of movies and TV shows on the platform. It shows that movies dominate the content library, while TV shows form a smaller but significant portion. This helps understand content type preference.



## 6. KPI Cards Section

Shows quick insights such as total titles, unique genres, and rating summary.

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## 11. Challenges & Solutions

### 1: Missing or Incomplete Data

Some titles lacked ratings or director information.

**Solution:** Used Power Query to remove or fill missing values.

### 2: Inconsistent Data Formats

Dates and genres had multiple formats.

**Solution:** Standardized using Power Query transformations.

### 3: Large Dataset Performance Issues

Dashboard slowed down with multiple visuals.

**Solution:** Optimized by removing unnecessary columns and using measures.

### 4: Difficulties in Geographical Mapping

Country names were inconsistent or missing.

**Solution:** Cleaned location column and grouped ambiguous entries.

### 5: Extracting Meaningful Insights

Raw data did not directly show patterns.

**Solution:** Designed KPIs, slicers, and trend visuals to make insights visible.

## 12. Future Improvements

- Add user engagement metrics such as watch duration or popularity index.
  - Compare Amazon Prime with Netflix, Hotstar, and other OTT platforms.
  - Integrate sentiment analysis using user reviews.
  - Build forecasting models to predict content popularity.
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## 13. Conclusion

This project demonstrates a complete analytics workflow starting from data cleaning to visualization and insight generation. As a fresher, this work showcases proficiency in **Power BI, Excel, SQL, Power Query, dashboard development, and data storytelling**. The insights generated through this analysis can help understand content trends, genre preferences, and production patterns on Amazon Prime Video.

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