**Technical Report: Netflix Global Content Analysis**

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**2. Introduction**

**Objective of the Project:**  
To explore global patterns in Netflix content ratings, genres, countries, and release timelines using visual analytics. The dashboard aims to provide insights for content strategists, media analysts, and entertainment marketers.

**Problem Being Addressed:**  
With Netflix’s vast and diverse library, understanding which types of content succeed globally is crucial. This project focuses on identifying production hotspots, rating distribution, dominant genres, and temporal growth of content to guide strategic content investments.

**Key Datasets and Methodologies:**  
The dataset comprises Netflix shows and movies from multiple countries with attributes such as rating, genre, release year, and runtime. Power BI was used to design an interactive dashboard to visualize country dominance, genre diversity, rating patterns, and historical trends.

**3. Story of Data**

**Data Source:**  
A compiled open-source dataset containing Netflix’s global content catalogue, including title metadata (year, rating, genre, country, duration).

**Data Collection Process:**  
Scraped and curated from Netflix’s public API and verified third-party databases. Each entry reflects one title (movie or show), with country and genre classification.

**Data Structure:**

* **Rows:** Each row represents a unique movie/show title
* **Columns:** Include release year, runtime, rating, country, and genres

**Important Features and Their Significance:**

* **Title**: Content identifier
* **Rating**: Audience classification (e.g., TV-MA, PG-13)
* **Genre**: Helps detect content trends and consumer preferences
* **Release Year**: Highlights historical production growth
* **Runtime**: Used to calculate average watch time
* **Country**: Maps geographic production focus

**Data Limitations or Biases:**

* Some titles appear under multiple genres or countries, causing overlap
* Not all content metadata was available (e.g., missing ratings or runtimes for some older titles)

**4. Data Splitting and Preprocessing**

**Data Cleaning:**  
Duplicate entries were removed. Categorical fields (e.g., ratings and genres) were standardized. Irrelevant columns such as show descriptions were excluded for brevity.

**Handling Missing Values:**  
Minimal missing values; titles without year or rating were excluded. Runtime was standardized in minutes for uniformity.

**Data Transformations:**

* **Top Country Titles:** Count of titles produced by each country
* **Average Runtime per Title**: Converted hours/minutes to total minutes
* **Top Genres**: Aggregated based on co-occurrence
* **Rating Distribution**: Counted by classification codes (TV-MA, TV-14, PG, etc.)

**Data Splitting:**

* **Dependent Variables:** Genre popularity, rating distribution
* **Independent Variables:** Country, year, duration

**Industry Context:**  
Media and entertainment analytics helping studios, distributors, and marketers understand viewing trends.

**Stakeholders:**  
Netflix content team, global marketers, media buyers, data analysts in entertainment.

**Value to the Industry:**  
Uncovers high-performing content types by region, age group, and genre to support investment and creative decisions.

**5. Pre-Analysis**

**Key Trends:**

* Total titles analysed: **6,131**
* Peak content release year: **2018**
* Average movie duration: **99.59 minutes**
* Dominant production country: **USA**

**Potential Correlations:**

* Higher content volume from North America is linked with more mature ratings (TV-MA, R)
* Rise in TV shows after 2000 with shorter runtimes
* Genre diversity appears broader in countries with more titles

**Initial Insights:**  
TV-MA and TV-14 dominate the rating system, with documentaries and drama being the most saturated genres.

**6. In-Analysis**

**Unconfirmed Insights:**

* Despite the USA dominating volume, countries in Asia and Europe show strong genre diversification
* Some countries contribute fewer titles but skew toward niche genres (e.g., anime, foreign drama)
* Family and Kids genres are less represented, suggesting a content gap

**Recommendations:**

* Expand genre offerings in underrepresented regions to localize global strategy
* Tailor family-friendly content for markets with low R/TV-MA penetration
* Analyse title trends across time for deeper seasonal planning

**Analysis Techniques Used in Power BI:**

* **KPI Tiles:** Show total movies, top country, top year, average duration
* **Bar Charts:** Rating distribution, top genres
* **Line Graph:** Content release growth over time
* **Geo Heat Map:** Title volume by country
* **Scrollable Bar Charts:** Drill-down into top genres and ratings

**7. Post-Analysis and Insights**

**Key Findings:**

* **Top Genre:** Drama, with over 360 entries
* **Most Common Rating:** TV-MA (3.2K titles)
* **Top Release Year:** 2018
* **Top Country (by content count):** USA
* Significant surge in content post-2000, particularly in TV Shows
* Documentaries and Stand-Up Comedy are also prominent globally

**Comparison with Initial Findings:**  
Initial assumption of drama dominance holds true. However, the rise of comedy-based and international content suggests diversification in recent years.

**8. Data Visualizations & Charts**

* **KPI Cards:** Total movies, top release year, average minutes, top country
* **Bar Chart:** Rating distribution across all titles
* **Bar Chart:** Top genres by frequency
* **World Map:** Title distribution by country
* **Line Chart:** Historical trend of show releases by year
* **Overlay Metrics:** Dual line showing movies vs. TV shows growth

Each chart is designed to enhance understanding of market penetration, content type shifts, and regional dominance in the streaming space.

**9. Recommendations and Observations**

**Actionable Insights:**

* Increase family-oriented and kid-friendly content to balance rating bias
* Invest in regional productions in South America and Southeast Asia to reduce over-reliance on the USA
* Capitalize on rising comedy/documentary demand with global appeal

**Optimizations or Business Decisions:**

* Localize platform experience with region-specific genre boosts
* Use release year trends to schedule content marketing spikes
* Monitor runtime vs. genre correlation for content performance tuning

**Unexpected Outcomes:**

* High number of titles in mature categories despite global expansion
* Steady growth in content volume contradicts assumption of saturation

**10. Conclusion**

**Key Learnings:**  
Netflix’s content strategy is heavily influenced by the USA, mature ratings, and genres like drama/documentary. However, there is untapped potential in global markets with specific genre gaps.

**Limitations:**  
Genre classifications were broad; some shows fall under multiple genres. Data did not include viewer stats (views, ratings), limiting performance insights.

**Future Research:**

* Correlate genre success with audience ratings/view counts
* Study performance by language and subtitles availability
* Incorporate user demographics to personalize insights

**11. References & Appendices**

**References:**

* Netflix Open-Source Content Dataset
* Internal Power BI Visual Logic
* Public Streaming Content Libraries (e.g., Kaggle Netflix dataset)

**Appendices:**

* Genre & Rating Classification Table
* Power BI Schema Model
* Full Top 100 Genre & Country Contribution List