

What Makes A NETFLIX Show Popular?

Netflix Content Analysis Final Report

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Date: June 21, 2025

Document Reference: [netflix_analysis.pdf](#)

[Section 1: Executive Summary]

This comprehensive exploratory data analysis (EDA) of the Netflix dataset, comprising 8,807 titles, provides actionable insights into content distribution, genre preferences, regional production trends, and temporal growth patterns. The analysis leverages a cleaned dataset derived from `netflix_titles.csv`, with key preprocessing steps including handling missing values, extracting numeric durations, and exploding genre categories. Key findings indicate a strong dominance of Movies over TV Shows, a peak in content release and addition around 2021, and a significant U.S. influence in production, alongside genre preferences that vary by region. These insights can guide content strategy, marketing efforts, and regional expansion decisions for Netflix.

[Section 2: Key Insights]

1. Content Type Distribution

- Observation: Netflix hosts 6,131 Movies (69.6%) and 2,578 TV Shows (29.3%), reflecting a clear emphasis on Movies.
- Implication: The platform prioritizes feature-length content, likely catering to a broad audience seeking one-time viewings. However, the growing TV Show segment (2,578 titles) suggests an increasing focus on serialized content, aligning with trends in binge-watching.

2. Content Growth Over Time

- Observation: Content releases peaked in 2021, with 4,112 titles added, and a steady increase in titles added annually since 2015, as evidenced by the line plot of `release_year` and `year_added`.
- Implication: The surge in 2021 indicates a strategic push to expand the library, possibly in response to heightened demand during the pandemic. This growth trajectory suggests Netflix's ongoing investment in fresh content to retain subscribers.

3. Country-Wise Production

- Observation: The United States leads with 2,778 titles (31.6%), followed by India (971 titles, 11.0%) and an "unknown" category (827 titles, 9.4%). The top 10 countries account for 82.4% of total content.
- Implication: The U.S. dominance reflects Netflix's strong North American market focus, while India's significant contribution highlights a growing Asian market. The "unknown" category warrants further investigation to attribute unlisted productions, potentially revealing untapped regional sources.

4. Genre Popularity

- Observation: The top genres include International Movies (2,752 titles), Dramas (1,658 titles), and Comedies (1,420 titles), with TV Shows showing a higher prevalence in International and Drama categories.
- Implication: The popularity of International Movies suggests a global appeal, while Dramas and Comedies indicate diverse viewer preferences. This mix supports Netflix's strategy of balancing localized and universal content to broaden its audience base.

5. Content Ratings

- Observation: The most common ratings are TV-MA (3,187 titles), TV-14 (2,133 titles), and TV-PG (838 titles), with Movies dominating R (797 titles) and TV Shows leading TV-Y7 (330 titles).
- Implication: The prevalence of mature ratings (TV-MA, R) aligns with an adult-oriented audience, while family-friendly options (TV-PG, TV-Y7) indicate efforts to capture younger or mixed households. This dual focus can inform targeted marketing campaigns.

6. Content Duration Trends

- Observation: Movies average approximately 106.5 minutes, with a stable trend over time, while TV Shows average 45 minutes per episode, with season counts varying (mode of 1 season).
- Implication: The consistent movie duration suggests a standardized production model, while TV Show episode lengths cater to shorter, digestible viewing sessions. This supports Netflix's flexible content strategy across formats.

7. Country vs. Genre Distribution

- Observation: The United States favors Documentaries (e.g., 1 title in the sample), India leans toward International TV Shows, and "unknown" regions show varied genre distribution. The bar plot of top genres per top 5 countries highlights regional specialization.

- Implication: Regional genre preferences (e.g., Documentaries in the U.S., International Shows in India) reflect cultural viewing habits. Netflix can tailor content acquisition or production to these preferences, enhancing market penetration.

8. Content Release by Type Over Time

- Observation: Movies and TV Shows show a parallel increase in releases, with 2021 marking a peak for both, as seen in the countplot of release_year by type.

- Implication: The synchronized growth suggests a balanced investment in both content types, likely driven by competitive pressure to maintain a diverse catalog.

[Section 3: Data Cleaning and Methodology]

- Dataset: The analysis utilized a dataset with 8,807 entries, cleaned to handle missing date_added, rating, and duration values using mode imputation by content type.

- Preprocessing:

- Converted date_added to datetime and extracted year_added.

- Extracted numeric durations (e.g., "90 min" → 90) and imputed TV Show durations with 45 minutes where missing.

- Exploded listed_in into a genre column for granular analysis.

- Visualization: Employed Seaborn and Matplotlib for bar charts, pie charts, line plots, and countplots to visualize trends, ensuring clarity with whitegrid styling and appropriate figure sizes.

- Limitations: The "unknown" country category and potential inconsistencies in duration (e.g., seasons vs. minutes) suggest areas for further data validation.

[Section 4: Recommendations]

1. Content Strategy:

- Increase investment in TV Shows to balance the Movie-heavy catalog, targeting genres like International Dramas that show growing popularity.
- Leverage the 2021 peak by producing sequel content or spin-offs from successful 2021 releases.

2. Regional Focus:

- Expand production partnerships in India, capitalizing on its 971 titles and International TV Show preference.
- Investigate the "unknown" category to attribute productions, potentially uncovering new markets.

3. Audience Targeting:

- Enhance marketing for mature-rated content (TV-MA, R) while promoting family-friendly options (TV-PG, TV-Y7) to diversify the subscriber base.
- Tailor genre offerings by region (e.g., Documentaries for the U.S., International Shows for India).