Executive Summary: Netflix Movie Analysis

Objective:

This analysis explores Netflix's movie dataset to uncover trends in **genre popularity, content ratings, and production trends over time**. The goal is to derive insights that can assist in **content strategy, user engagement, and market expansion**.

Key Insights & Findings

1. Data Preprocessing & Cleaning:

- The dataset contained **missing values and duplicates**, which were removed to ensure data integrity.

- Non-essential columns (`Overview`, `Original Language`, `Poster URL`) were dropped.

- The `Release_Date` column was converted into `Year` to enable time-based trend analysis.

- The `Vote_Average` column was categorized into four groups:

    - **Not Popular:** 0–4

    - **Below Average:** 4–6

    - **Average:** 6–8

    - **Popular:** 8–10

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2. Genre Analysis & Popularity:

- The dataset originally listed multiple genres per movie. These were split and **exploded** to allow independent analysis of each genre.

- **Top 5 Most Frequent Genres:**

- ○ **Drama (~30%)** – The most dominant category, making up nearly **1/3rd of all movies**.

- ○ **Comedy (~22%)** – A major genre, suggesting high audience engagement.

- ○ **Action (~15%)** – Strong presence, likely appealing to global audiences.

- ○ **Thriller (~12%)** – Consistently popular, aligning with Netflix's suspense-driven content.

- ○ **Horror (~9%)** – A niche but growing category, performing well in specific markets.

- ● **Least Frequent Genres:**

  - ○ **Documentary (~4%)** – Focused on educational and real-life stories.

  - ○ **War (~2%)** – Limited in production, likely due to its niche audience.

- ● Netflix has a **strong focus on Drama, Comedy, and Action**, while niche genres like **War and Documentary** remain underrepresented.

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3. Movie Ratings & Quality Analysis:

- ● The dataset was divided into rating categories to assess the distribution of high-quality content:

  - ○ **Not Popular (0–4):** ~5% of movies

  - ○ **Below Average (4–6):** ~35%

  - ○ **Average (6–8):** ~40%

  - ○ **Popular (8–10): Only 20%** of movies fall into this top tier.

- ● **Implications:**

  - ○ **80% of Netflix movies fall into Below Average or Average categories**, indicating a quality gap.

- The **lack of a strong presence of high-rated content (8+) suggests a need to improve content curation.**

- This highlights the opportunity to **push more high-quality content** via acquisitions or better content creation strategies.

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4. Production Trends Over Time:

- **Year-wise content analysis** shows a **significant rise in movie production post-2010**.

- Before 2010, Netflix had limited content, but **post-2015, there was a dramatic surge in new movies**.

- **Peak Years of Content Release:**

  - **2018–2021:** The highest number of movies were released, likely due to Netflix's **original content expansion** strategy.

  - **2020:** The pandemic-driven boom saw a sharp increase in new content.

- **Trend Implications:**

  - **Netflix's focus on expanding its catalog is evident, but ensuring quality control is crucial.**

  - The **growth of new movies correlates with Netflix's international expansion**.

Business Implications & Recommendations

✅ **Content Strategy:**

- **Increase high-quality productions** in popular genres (Drama, Comedy, Action).

- **Leverage data-driven insights** to produce more **highly-rated content** rather than increasing quantity.

✅ **User Engagement & Recommendations:**

- **Refine recommendation algorithms** to highlight the **top 20% of movies** with an **8+ rating**.

- Create **genre-based personalized playlists** to enhance engagement.

✅ **Market Expansion Opportunities:**

- Explore **underrepresented genres like War & Documentaries** to cater to niche audiences.

- Invest in **localized content** for regions with growing Netflix penetration.

Final Thoughts

Netflix's dataset reveals a **rapidly expanding movie library** with **strong dominance in Drama and Comedy**. However, **quality concerns persist**, with only **20% of movies rated 8+**. To maintain market leadership, **Netflix should focus on quality over quantity, refine recommendations, and explore underrepresented genres.**