

# Task-3: Exploratory Data Analysis (EDA) on Netflix Streaming Dataset

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## Objective

To conduct an **Exploratory Data Analysis (EDA)** on the **Netflix Movies and TV Shows Dataset** from Kaggle. The purpose is to uncover hidden patterns, visualize relationships, and summarize insights about Netflix's global content strategy through a visually engaging and data-driven approach.

## Tools & Platforms Used

Tool/Library	Purpose
Python	Data analysis and scripting
Pandas	Data cleaning and manipulation
NumPy	Numerical computations
Matplotlib & Seaborn	Data visualization and trend analysis

( Icon Placeholder – Tech Tools)

## 1. Introduction

Netflix, the world's leading streaming platform, offers a vast collection of movies and TV shows across multiple genres and countries. This analysis explores the dataset to identify **content trends, genre preferences, audience ratings, and global distribution**, providing a clear picture of Netflix's evolution and diversity.

( Icon Placeholder – Film Reel)

## 2. Dataset Summary

**Source:** Kaggle – Netflix Movies and TV Shows Dataset

**Total Records:** ~8,800 entries

Feature	Description
show_id	Unique identifier for each title
type	Movie or TV Show
title	Name of the content
director, cast	Key contributors
country	Country of origin
release_year	Year of release
rating	Content rating (e.g., TV-MA, PG-13)
duration	Duration in minutes or number of seasons
listed_in	Genre/category

( Icon Placeholder – Dataset Overview)

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### 3. Data Cleaning & Preparation

- Removed missing values in director, cast, and country columns.
- Standardized text formats for uniformity.
- Extracted year and duration information for analysis.
- Created new columns for grouping (e.g., main\_genre, content\_type).

( Icon Placeholder – Data Processing)

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### 4. Patterns Observed

- Content Type:** Movies dominate with ~70%, while TV shows make up ~30%.
- Release Trend:** Rapid growth after 2015, peaking around 2019.
- Ratings:** Majority of titles are **TV-MA** and **TV-14**, targeting mature audiences.
- Duration:** Most movies range between 90–120 minutes.

( Graph Placeholder – Bar Chart: Movies vs TV Shows)

( Graph Placeholder – Line Chart: Content Growth Over Years)

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### 5. Genre & Ratings Insights

- Top Genres:** Dramas, Comedies, and Documentaries dominate the platform.
- Family/Kids Content:** Comparatively limited.
- Ratings Breakdown:**
  - TV-MA: 35%
  - TV-14: 25%

- PG/PG-13: 15%
- Others: 25%

( Graph Placeholder – Horizontal Bar Chart: Top Genres)

( Graph Placeholder – Pie Chart: Ratings Distribution)

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## 6. Global Distribution

- **Top Contributing Countries:** United States, India, United Kingdom, and Canada.
- **Regional Highlights:**
  - The **US** dominates both movies and TV shows.
  - **India** shows strong growth in regional and Bollywood content.
  - **Europe** contributes significantly to documentaries and dramas.

( World Map Placeholder – Neon Blue Highlights for Top Countries)

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## 7. Key Observations

- Netflix's content library expanded rapidly post-2015.
- The platform emphasizes **mature-rated** and **diverse genres**.
- **Dramas and comedies** dominate across all regions.
- The **US** remains the largest content producer, but **international contributions** are steadily increasing.

( Growth Trend Visual Placeholder – Neon Gradient Line Graph)

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## 8. Conclusion

The EDA reveals Netflix's strategic evolution toward **global diversity, mature storytelling, and original productions**. The platform's growth reflects the worldwide shift toward digital streaming, with a strong emphasis on **regional representation** and **genre variety**.

Netflix continues to redefine entertainment by blending **data-driven insights** with **creative storytelling**, making it a global leader in the streaming industry.

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## Design & Aesthetic Notes (for Canva Presentation)

- **Theme:** Tech • Youth • Modern
- **Color Palette:** Neon Blue • Black • White
- **Typography:** Bold Sans-serif for titles, clean geometric fonts for body text
- **Visual Style:**
  - Use **modern geometric shapes** and **gradient overlays**
  - **High-contrast titles** with glowing neon accents
  - Include **icons** for each section (film reel, chart, globe, etc.)
  - Add **graph placeholders** and **world map visuals** for storytelling impact

(💡 *Design Tip: Use neon blue gradients on black backgrounds for a futuristic, tech-inspired aesthetic.)*