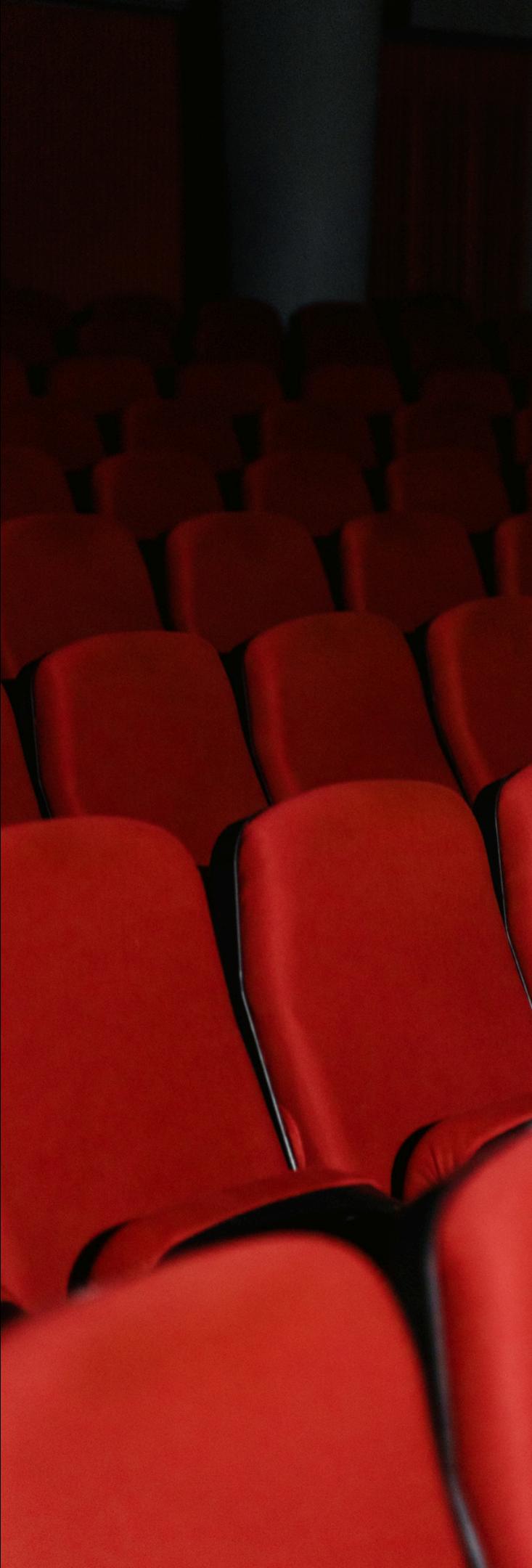


Netfliix

Data Analysis
Dashboard

Nandachowgle@gmail.com



Netflix data

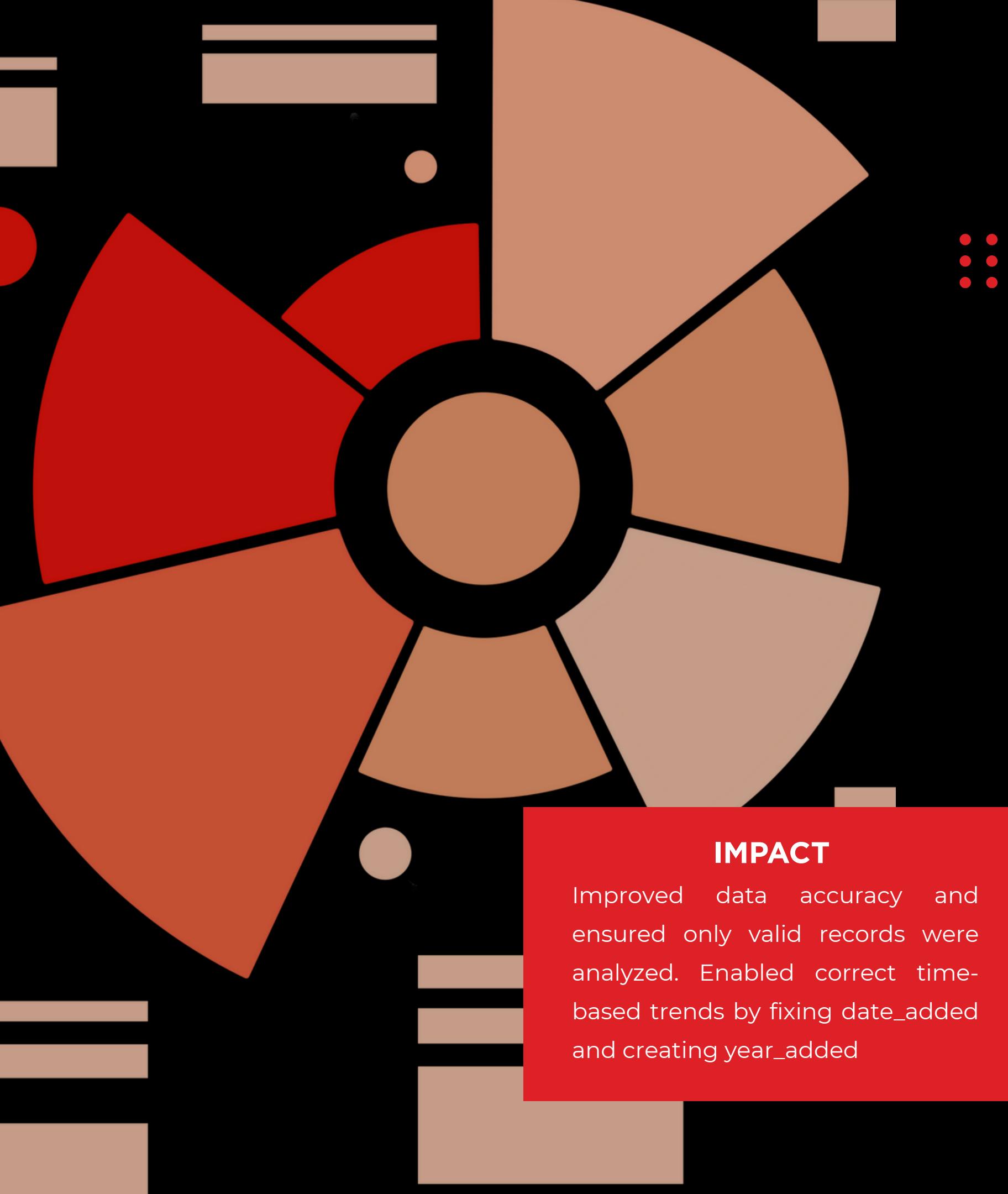
Objective

8k+

Movies, TV shows

Analyse the content catalogue of Netflix to uncover distribution trends by type, genre, country, and year. Build an interactive analytics dashboard using Python and Streamlit for real-time exploration and insights. Enable users to filter, visualize and download data to support data-informed storytelling and decision-making.

Tools Used: Python, Streamlit, Pandas, Matplotlib, Seaborn, WordCloud



DATA CLEANING & PREPROCESSING

Dropped duplicate records to maintain data integrity. Removed rows missing key columns (such as director, country) to ensure reliable analysis. Converted the date_added field into a datetime format and extracted a year_added column. Filled missing values in categorical fields like rating and duration with “Unknown” to retain completeness.

IMPACT

Improved data accuracy and ensured only valid records were analyzed. Enabled correct time-based trends by fixing date_added and creating year_added

Netflix data

Exploratory Data Analysis



Analytical Steps

- Studied distribution between Movies and TV Shows
- Identified top 10 countries producing Netflix content
- Analyzed yearly content additions to track growth trends
- Explored ratings distribution (TV-MA, TV-14, etc.)
- Visualized popular genres through a word cloud and frequency charts

Insights Gained

- Netflix's catalogue is movie-dominated (~85%) compared to TV shows
- United States and India lead in overall content volume
- Sharp increase in content after 2015, aligning with Netflix's global expansion
- Dramas, Comedies, Documentaries emerge as top genres
- Mature ratings (TV-MA) are most frequent, indicating adult-focused content

Dashboard Design

- Cinematic Netflix-style UI: black and red theme with glowing 3D elements
- Welcome Screen: interactive intro with “🎬 Start Exploring” button
- Dynamic Sidebar Filters: filter by Type, Country, Genre, and Year
- Animated KPI Cards: show key metrics (Total Titles, Movies, TV Shows, Countries)
- Visualization Tabs: content type, countries, yearly trends, ratings, genres, and word cloud
- Data Download Option: export filtered dataset as CSV

Design Highlights

- Consistent color palette (Netflix Red #E50914, Black #ODODOD) for branding
- Added hover animations and pulse glow effects for engagement
- Uniform card sizes for balanced layout
- Optimized visuals for speed and readability
- Built using Streamlit, ensuring easy web deployment and interactivity



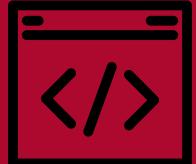
Netflix data

Key Insights & Observations

- 01** Movies dominate Netflix's catalogue – about 85 – 90 % of all titles.
- 02** United States and India lead as the top content-producing countries.
- 03** A major surge after 2015 shows Netflix's global expansion and original-content push.
- 04** Drama, Comedy, and Documentary are the most common genres.
- 05** TV-MA and TV-14 ratings appear most often, reflecting mature-audience focus.
- 06** Peak content growth occurred between 2018 – 2020.

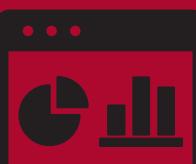
Tech Stack & Tools Used

Programming & Data Processing



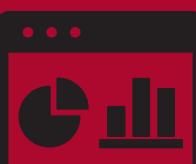
Python 3.9+ – core language for all analysis and visualization. Pandas – data cleaning, transformation, and preprocessing. NumPy – numerical operations and handling missing data. Matplotlib & Seaborn – charts and visual storytelling. WordCloud – textual representation of most-used words in titles

Dashboard Development



Streamlit – interactive, web-based dashboard with sidebar filters and animations. Custom CSS Styling – Netflix-themed cinematic UI with 3D glow effects. KPI Cards & Tabs – for content type, country, rating, and genre visualizations.

Development & Version Control Tools



VS Code – coding, debugging, and project structuring. Git & GitHub – version control and project portfolio hosting. Streamlit Cloud – deployment for public access and demo presentation

A decorative sidebar on the left side of the slide features several movie-related icons in a dark red color. At the top is a movie camera. Below it is a film reel. To the left of the reel is a clapperboard with the word 'CINEMA' and some numbers. A film strip is coiled downwards. At the bottom is a bucket of popcorn.

Netflix data

Conclusion & Future Scope

- Successfully developed an interactive and visually engaging Netflix Data Analysis Dashboard using Python and Streamlit.
- Performed complete data cleaning, preprocessing, and exploratory analysis for reliable insights.
- Built a cinematic UI inspired by Netflix's theme, featuring animated KPI cards and dynamic filters.
- Enabled data-driven exploration by type, country, genre, and release year.
- Demonstrated ability to integrate data analysis, visualization, and UI design in one cohesive project.

Future Scope

- Integrate machine learning to predict popular genres or recommend shows.
- Add time-series forecasting for future content trends.
- Expand dataset with IMDb ratings or viewer data for deeper insights.
- Deploy on Streamlit Cloud with real-time updates and user input.
- Include interactive storytelling elements like trailer previews or content links.



thank
you