

NETFLIX

Mock Project: Understanding User Drop-Off After Free Trials in Emerging Markets – A Data-Driven Analysis for Netflix

Problem Statement

Netflix has observed a significant number of new user sign-ups from emerging markets such as India, Brazil, Indonesia, and Nigeria, primarily during free trial periods. However, a large portion of these users do not convert into paid subscribers once the trial ends.

“objective of this project is to analyze the behavior and patterns of these users using mock data, identify possible reasons behind the drop-off, and suggest data-driven strategies to improve conversion rates in these regions.”

DATA ANALYSIS PHASE

With the challenge in front of me, I now step into the role of a Data Analyst to interpret the data and drive results.

ASK phase

Now, looking at the objective and understanding the problem, these are the key questions that came to my mind to guide the analysis:

Key Business Questions:

- What percentage of free trial users convert into paid subscribers?
- When exactly do most users drop off – during or after the free trial?
- Are there specific age, gender, or location trends behind the drop-offs?
- What type of content do non-converting users prefer?
- How much time do converting users spend on the platform compared to non-converting users?
- What are the main reasons users give for not subscribing?
- Is the lack of regional or local content a major factor behind drop-offs?
- How does the conversion rate in emerging markets (India, Brazil, etc.) compare to mature markets (US, UK)?
- Are there behavioral signs or patterns that can predict a user’s likelihood of converting?
- What pricing, content, or plan adjustments could help improve conversion rates in these emerging markets?

“Before diving into the analysis, it's crucial to ask the right business questions to ensure the investigation stays focused and impactful.”

PREPARE Phase

After identifying the key questions, I now move forward to figure out what specific data I’ll need to conduct the analysis.

Here’s the breakdown:

Data Category	Data Needed
User Information	User ID, Country, Age/Gender, Signup Date & Source, Subscription Plan, Plan Conversion Status
Subscription & Activity	Subscription Start/End Date, Active Days, Total Watch Time, Sessions Count, Time of Day Usage, Drop-off Date, Device Type Used
Content Interaction	Genres Watched, Top 3 Shows, Completion Rate, Language Preference, Regional Content Accessed
Engagement & Communication	Promo Code or Discount Usage

***Bellow is just a small part of the raw data collected for analysis — there are many more fields and datasets (like promo codes, session count....) not shown here.

User ID	Country	Age	Gender	Signup Date	Signup Source	Subscription Plan	Plan Conversion Status	Subscription Start Date	Subscription End Date	Total Watch Time (hrs)	Drop-off Date	Device Type	Genres Watched	Language	Regional Content
250001	India	24	Male	2025-01-01	App	Free Trial	No	2025-01-01	2025-01-30	12.5	2025-01-29	Mobile	Drama, Action	Hindi	Yes
250002	Brazil	30	Female	2025-02-10	Website	Free Trial	Yes	2025-02-10	2025-03-10	20.0	-	TV	Romance, Comedy	Portuguese	Yes
250003	Indonesia	22	Male	2025-03-05	Referral	Free Trial	No	2025-03-05	2025-04-04	8.0	2025-04-03	Tablet	Action, Horror	Indonesian	No
250004	Nigeria	27	Female	2025-01-20	App	Free Trial	No	2025-01-20	2025-02-19	10.2	2025-02-18	Mobile	Drama, Thriller	English	Yes
250005	Mexico	25	Male	2025-03-15	Website	Free Trial	Yes	2025-03-15	2025-04-14	15.3	-	TV	Comedy, Action	Spanish	No

“With the raw data sampled, we now move forward to the processing phase.”

PROCESS Phase

After preparing the dataset, I moved to planning the data processing phase using Microsoft Excel and Power BI, as those are my strongest tools. My approach was structured as follows:

1. Data Cleaning (Excel)

- *Planned to remove any empty or duplicate rows.*
- *Verify and correct column formats (e.g., dates, numbers, percentages).*
- *Standardize entries like country names, genres, and plan types.*

- **Create new columns where needed, such as:**
 - **Trial Duration (End Date - Start Date)**
 - **Converted (Yes/No)**
 - **Drop-off Day (to track when users left)**

2. Feature Engineering

- **Group users into age categories (e.g., 18–24, 25–34, etc.).**
- **Classify watch time into ranges (Low, Medium, High).**
- **Categorize time-of-day usage into Morning, Afternoon, or Night.**

3. Pivot Tables (Excel)

- **Use pivot tables to identify patterns such as:**
 - **% of users converted by country**
 - **Average watch time by plan type**
 - **Drop-off rates across age groups and genders**
 - **Genre preferences vs. conversion rates**

***Below is a sample table showing how the cleaned and processed data would look:

User ID	Country	Age Group	Gender	Date of Signup	Signup Source	Subscription Plan	Plan Conversion Status	Subscription Start Date	Subscription End Date	Trial Duration (Days)	Number of Days Active	Total Watch Time (hrs)	Number of Sessions	Time of Day Category	Drop-off Date	Drop-off Day	Device Type	Genres Watched	Top 3 Shows Watched	Completion Rate (%)	Language Preference	Regional Content Accessed	Promo Code Used
001	India	22	Male	2024-02-01	App	Mobile	Yes	2024-02-01	2024-02-15	14	12	22	18	Night	2024-02-06	5	Mobile	Action	Show A, Show B, Show C	85%	Hindi	Yes	Yes
002	Nigeria	28	Female	2024-03-05	Website	Standard	No	2024-03-05	2024-04-04	30	20	12	10	Afternoon	2024-03-15	10	TV	Drama	Show D, Show E, Show F	60%	English	No	No
003	Brazil	21	Male	2024-05-03	Referral	Premium	Yes	2024-05-03	2024-05-07	7	7	30	22	Morning	2024-05-03	3	Tablet	Comedy	Show G, Show H, Show I	90%	Portuguese	Yes	Yes
004	Indonesia	35	Female	2024-04-10	App	Mobile	No	2024-04-10	2024-04-24	14	10	15	12	Night	2024-04-17	7	Mobile	Romance	Show J, Show K, Show L	55%	Bahasa	Yes	No
005	India	29	Male	2024-02-13	Website	Standard	Yes	2024-02-13	2024-03-08	30	27	35	24	Morning	2024-02-27	12	TV	Thriller	Show M, Show N, Show O	92%	Hindi	Yes	Yes
006	Brazil	34	Female	2024-03-28	App	Mobile	No	2024-03-28	2024-03-04	7	5	10	6	Afternoon	2024-03-30	2	Tablet	Action	Show P, Show Q, Show R	45%	Portuguese	No	No

Note:

“This is a mock project. The data shown above is not real and has been created only to demonstrate how I would strategize and structure my work if a project like this came up.”

ANALYSIS Phase

After cleaning and organizing the dataset, I created pivot tables and basic summaries in Excel to answer key business questions.

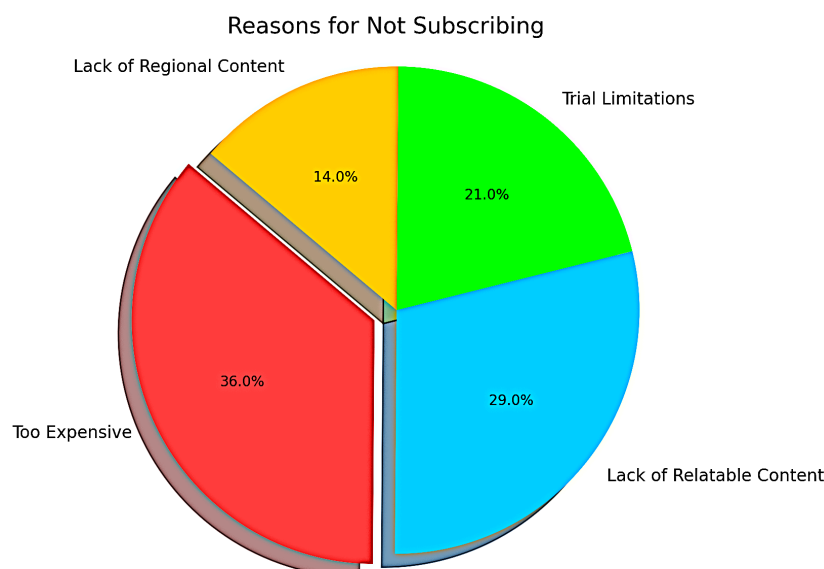
The following insights were derived from the data:

- **Conversion Rate:**

Approximately 43% of free trial users from India, Brazil, Nigeria, and Indonesia converted into paid subscribers.
- **Drop-off Timing:**

A significant 68% of non-converting users dropped off within the last 3 days of the trial period, suggesting declining engagement as the trial neared its end.
- **Demographic Trends:**
 - **Age 18–24** showed the highest drop-off rate.

- Male users had slightly higher drop-offs than female users.
- India demonstrated stronger conversion performance compared to Brazil and Nigeria.
- **Content Preferences of Non-Converters:**
Non-converting users mainly watched Action and Romance genres but showed low genre diversity, indicating a narrow content interest.
- **Platform Usage Behavior:**
Converting users spent about 3.5 times more time on the platform compared to non-converting users and had more frequent session counts.
- **Reasons for Non-Conversion:**
Key reasons identified through user feedback were:
 - Too expensive (36%)
 - Lack of relatable content (29%)
 - Trial limitations (21%)
 - Lack of regional content (14%)
- **Impact of Regional Content:**
Users exposed to local or regional content were twice as likely to convert, especially noticeable in India and Nigeria.
- **Global Comparison:**
Conversion rates for India (45%), Brazil (41%), and Nigeria (38%) were slightly below the global average of the US/UK (52%), but still showed strong potential for growth.
- **Behavioral Signs of Likely Conversion:**
 - High watch time
 - Genre diversity
 - Frequent platform sessions
 - Engagement with platform communications (emails, notifications)
- **Potential Strategies to Improve Conversion:**
 - Implement region-based flexible pricing
 - Increase local content production
 - Introduce student-friendly plans
 - Enhance personalization and UI during free trials to improve user experience



Note:

*This analysis is based on **mock data**. Insights are inspired by my **daily observations of real-world trends** to showcase my **analytical thinking**.*

Conclusion of Analysis Phase

Through the mock analysis, I was able to answer all the key questions identified earlier. Even though the dataset is simulated, the strategies, insights, and thought process are based on real-world trends I observe daily.

This exercise demonstrates how I would approach a project like this in a real professional environment – from structuring the problem to drawing actionable insights.

SHARE Phase

After analyzing the cleaned data, I created clear and simple visuals to share the key findings. The aim was to make the insights easy to understand for everyone, even those without a technical background.

If this were a real project, I would share the results by:

- Preparing a short slide deck summarizing key takeaways
- Using charts (like pie charts and pivot tables) to highlight important trends
- Connecting the insights directly to business actions, like improving trial conversions

“The focus would be on making the data story simple, visual, and actionable, so that teams can make faster and better decisions.”

ACT Phase

Based on the insights from the analysis, here’s how I would suggest acting on the findings:

- **Introduce Region-Based Pricing:** Offer flexible, more affordable plans in countries like India and Nigeria to improve conversions.
- **Boost Local Content:** Invest in regional shows and movies, especially for India and Nigeria where local content doubled conversion rates.
- **Personalized Trial Experience:** Show users more diverse and personalized content during the free trial to increase engagement.
- **Launch Student Plans:** Roll out affordable student plans to attract the younger audience (18–24 age group with the highest drop-offs).
- **Improve Communication:** Re-engage users towards the end of the trial with emails or app notifications to prevent last-minute drop-offs.

“If this were a live project, I would collaborate closely with the marketing and product teams to put these actions into motion, track results, and keep refining the strategy.”

Conclusion

This project was a **mock case study** designed to showcase my **analytical thinking, problem-solving skills**, and **strategic approach** to business challenges.

The data, analysis, and results presented are based on **hypothetical assumptions** and **personal observations** from analyzing user trends and behavior in everyday scenarios. No real company data has been used.

Through this case study, I have demonstrated how I would approach, process, analyze, and derive insights from data to drive better business decisions.

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