User Segmentation Case Study

Analysis for a Streaming/Gaming Platform

Background

This project explores how behavioral data can be used to identify meaningful user segments in a digital entertainment platform. The goal was to move beyond basic usage metrics and instead understand who our users are, how they engage, and what drives different types of value within the product.

Using 30-day behavioral data, I built a Tableau dashboard that segments users into distinct personas based on session activity, social interactions, and multiplayer engagement. The final output provides actionable insights that could inform product strategy, feature prioritization, and retention efforts.

Business Question:

What are the main user personas on the platform, and how do their behaviors differ? Understanding these personas helps answer:
- Which users are most engaged?
- Which users are driven by social features?
- Where should the product team focus to improve retention and monetization?

Data

Each row represents one user and includes 30-day activity metrics:
- Sessions in last 30 days
- Average session length
- Social interactions (messages, comments, etc.)
- Multiplayer sessions
- Device, country, and acquisition channel

These features allow us to differentiate between casual users, highly engaged users, and socially motivated users.

Methodology

Rather than using machine learning clustering, I applied rule-based behavioral segmentation. Users were grouped into three personas:

1. Power Users
   a. High session frequency and long playtime
   b. sessions_last_30_days ≥ 20

2. Social Users
   a. Moderate sessions but high social or multiplayer interaction
   b. social_interactions ≥ 8 OR multiplayer_sessions ≥ 6

3. Casual Users
    a. All remaining users with low overall engagement

To further quantify engagement intensity, I also created an Engagement Score, a weighted combination of sessions, session length, and social activity.

Key Insights

1. Power Users Drive Deep Engagement
    a. Power Users represent a smaller share of the user base but show the highest session frequency and longest play sessions.
    b. These users are likely the core audience and would be prime targets for premium features, loyalty programs, and advanced content.

2. Social Users Are Motivated by Community
    a. Social Users engage heavily in multiplayer and social interactions, even if their overall session counts are moderate.
    b. This suggests that social features are a key engagement driver and that enhancing community mechanics could improve retention.

3. Casual Users Form the Majority but Show Low Retention Risk
    a. Casual Users make up the largest segment but have low session counts and minimal social engagement.
    b. This group represents the biggest opportunity for onboarding improvements, habit-forming features, and re-engagement campaigns.

Recommendations

Based on the segmentation insights:

For Power Users
- Introduce advanced challenges, competitive leaderboards, or premium tiers
- Offer loyalty rewards to sustain long-term engagement

For Social Users
- Invest in multiplayer modes, friend systems, and in-app communication
- Promote social events and collaborative gameplay

For Casual Users
- Improve onboarding flows and early progression rewards
- Use reminders, streaks, or personalized recommendations to increase session frequency