

Loyalty Points Analysis Report – ABC Real-Money Gaming Platform

Goal was to compute and evaluate player loyalty for ABC gaming platform, using in-game behavior, deposit and withdrawal data. The objective was to assess player engagement through a defined loyalty points formula and recommend a fair reward distribution model.

Part A – Calculating Loyalty Points

A1 - Loyalty Points in Specific Time Slots

- **Time-Based Filtering:** Created a function that takes time slots as arguments to filter raw data for each player.
- **Aggregation:** Applied aggregations (e.g., sum, count) on three separate data files to extract key metrics per player.
- **Merging Data:** Combined all aggregated results into a single unified Data Frame for analysis.
- **Loyalty Points Calculation:** Applied a predefined formula to compute final Loyalty Points for each player based on the merged data.

A2: October Loyalty Ranking

- I calculated total loyalty points for all users across October.
- Players were ranked based on loyalty points and sorted using “sort_values()” pandas function.
- In case of ties, number of games played was used as a tiebreaker.

A3: Additional Metrics

- Average deposit amount = 5492.18
- Average deposit per user for a month = 4896.93
- Average games played per user = 1.0

Part B: Bonus Distribution Logic

Aim was to distribute Rs.50,000 to top 50 players proportionate to their loyalty points.

- Rewards high contributors more
- Aligned with the goal of encouraging deposits and gameplay
- Founded Amount to distribute per point and then used that metric to fairly divide the Bonus Amount.

Question – Should amount be shared based on their loyalty points, number of games or something else?

Answer – Well, I could have added other metrics to make distribution more fair and accurate, but since the loyalty points method already included all the important factors like no. of games played, deposit amount, withdrawal amount etc. I felt I only needed to make this formula more accurate and precise, but that's whole another question.

Part C – Formula Evaluation

The formula is pretty much on-point, but some changes could be made.

The formula evaluates monetary activities (deposits and withdrawal) more than consistency and activity of the user.

Therefore, Increasing the weight of Games played (upto 0.4x) and also adding a new factor named days_activity to track user's no. of logins and hours spend to calculate their consistency could be a good option.

Best Regards –

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