How can we increase revenue from
Catch the Pink Flamingo?

Sonu Singh

Problem Statement

How can we use the following data sets to understand options for increasing revenue from game players?

Flamingo Data : for Game Related Click Data Game Click, Ad-Click and Purchase Click.
Chat Data : Chat Related data in between Users, Teams, Chat Sessions and Chat Items
Combined data: Combined Data on Purchase Clicks and Amount of Purchase by users.

We can use the Dataset to understand the following points to

1. Get the BuyId Most Frequently Bought.

2. Get the BuyId which yielded the most money.

3. Get the Top ten Users who bought the Ad-in.

4. What type of Device Users are using who are top buyer.

5. Identify the Most Frequent and Active Users and team and target them for Advertisement to Increase the revenue.

Dataset will be helpful in Understanding the following points. After the Data Analytics on the Dataset
1. Get the BuyId Most Frequently Bought
2. Get the BuyID which yielded the most money.
3. Get the Top 10 Users who bought the Ad-in
4. What type if Device the users use who are top Buyer.
5. Identify the Most Frequent and Active Users and team and target them for Advertisement to Increase the revenue.

Data Exploration Overview (Ad-in Purchase Frequency)

- The **Top purchased** Item is BuyId "2" purchased 714 times

- The Top Money minter for the company is BuyId 5 whose total Purchase amount is 12200

- The top 3 users with the Amount spend on the Add-ins are 229, 12 and 471 with Amount of 225, 215 and 202.

- The Top 3 users are Iphone users.

In the Data Exploration we got to know that the Top Purchased Item is BuyId 2 and Least Purchase Item is BuyId 1.
The Add-in which produced the most money is 5 with 12200 as Total purchase amount.
Top Three Users with the Most Purchase of the Add-in are 2229, 12 and 471 who are Iphone user with Hit Ratio of 11.6%, 13.1% and 14.5% respectively.
And the Top 3 Users are Iphone Users.

What have we learned from classification?

- Mostly HighRoller are one who uses the **Iphone**. There is 83% chances of being HighRoller.

- Mostly Windows, Android and Linus users are pennypinchers.
  Android user have 86.5% chances of being PennyPinchers and 13.5% of beingHighRollers.
  Linux users have only 3% chances of being highroller and 97% chances of being pennypinchers.
  Windows users have 11.8% chances of being highroller and 88.2% chances of being pennypinchers.

- In **Mac** users 37% chances is being an Highroller and 63% chances of being and Pennypinchers.

- In Initial Team Level, the users are pennypinchers. And as the level increases the users seems to be HighRoller.

Out of the all four Platforms the Iphone have the most HighRollers with 86.5% Chances. They could be targeted with more Add-in Purchase with changes and Motivation in the game. All other Platforms are Pennypinchers like Android with only 13.5% HighRollers, Linus with 3% HighRollers and Windows with 11.8% HighRollers. Some Changes for them in terms of game could be done so that they could have some more highRollers.

What have we learned from clustering?

Three Clusters are found based on five Attributes (ClickCount, isHitCount, Ad_Click_Count, Purchase_Count and Purchase_Amount)

Cluster 1

- The User Plays the game a lot and have lots of **ClickCount** (Centre: 2259.13) and **Hit Count** (Centre: 247.01).

- The **Ad_Click** is second highest with Centre: 16.93

- **Purchase Count** and **Purchase Amount** is Medium with Centres 2.90 and 20.63 as Cluster Centre.

Cluster 2

- The User Plays the game least and least Centroid for **ClickCount** (Centre: 283.16) and **Hit Count** (Centre: 31.23).

- The **Ad_Click** is Lowest with Centre: 10.57

- **Purchase Count** and **Purchase Amount** is Lowest with Centres 1.95 and 14.21 as Cluster Centre.

Cluster 3

- These User mediocre in playing game frequency and Medium centroid for **ClickCount** (Centre: 882.34) and **Hit Count** (Centre: 97.83).

- The **Ad_Click** is Highest with Centre: 18.22

- **Purchase Count** and **Purchase Amount** is highest with centroids 3.25 and 23.63 as Cluster Centre.

The Clustering is done on the basis of five Attributes : ClickCount, isHitCount, Ad_Click_Count, Purchase_Count and PurchaseAmount.
We got three Clusters in the data.
Cluster one are the Users with the most time spend on playing game with Most Click Count and HitCount. But Ad_Click are Medium and are the Second most buyer out of the three clusters. With Purchase Count of 2.90 and Amount of 20.63.
Cluster 2 user are most inactive Players and Lowest Ad-Click and Lowest PurchaseCount and Purchase Amount.
Cluster 3 user comes to Second in term of Clicks and Hit. But when come to Ad_Click_Count they are Highest and have the most PurchaseCount and PurchaseAmount.
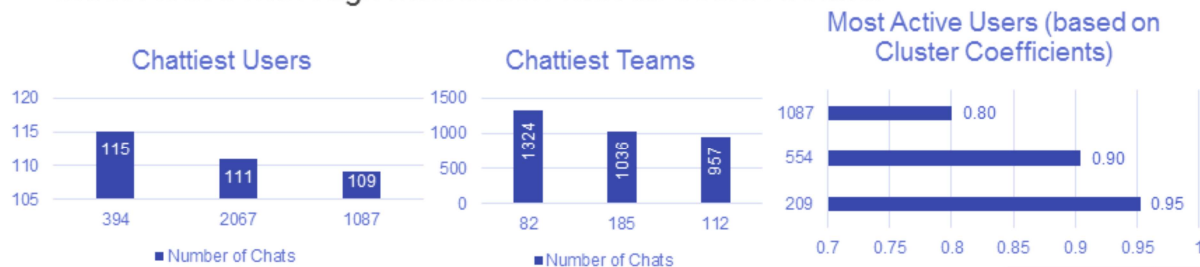
In Graphical Analytics we have targeted the Chat data to analyse the most Active Teams and Users in terms of chatting and responding.

Chattiest Users are 394, 2067 and 1087 with Chat Count of 115, 111 and 109 respectively.

Chattiest Teams are 82, 185 and 112 with Chat Count of 1324, 1036 and 957 respectively.

The Most Active and Cohesive Users who have received the response from the other Users and have high interaction are 1087, 554 and 209 with the response rate of 0.80, 0.90 and 0.95 respectively.

Recommendation

- To Increase the Revenue from Add-in Purchase Recommend the BuyId 2 and 5 as these are most Purchase and Most Money maker for Company

- Send some more Incentive in game to the Top three Users on Add-in are 2229, 12 and 471 so that they can buy more.

- Target Iphone users for Add-in as they are most Frequent Buyer of Add-ins.

- More Relevant ads to Users in Cluster 3 through Recommendation engine with some motivation in the game and they have most Ad Clicks in the game.

- Cluster 3 can be targeted buy more Add-in in the game as they are the most frequent Buyers.

- The Cluster 1 Users could be given motivation through incentive in game to Click on Ads.

- Relevant Ads can be posted to User and Teams with High Interactions which can help to increase advertisement Revenue.
  UserID: 394, 2067, 1087
  TeamID: 82, 185, 112
  Most Active Group of Users: 209, 554 and 1087

- The Recommendation are
  To Increase the Revenue from Add-in Purchase Recommend the BuyId 2 and 5 as these are most Purchase and Most Money maker for Company
- Send some more Incentive in game to the Top three Users on Add-in are 2229, 12 and 471 so that they can buy more.
- Target Iphone users for Add-in as they are most Frequent Buyer of Add-ins.
- More Relevant ads to Users in Cluster 3 through Recommendation engine with some motivation in the game and they have most Ad Clicks in the game.
- Cluster 3 can be targeted buy more Add-in in the game as they are the most frequent Buyers.
- The Cluster 1 Users could be given motivation through incentive in game to Click on Ads.
- Relevant Ads can be posted to User and Teams with High Interactions which can help to increase advertisement Revenue.
  UserID: 394, 2067, 1087
  TeamID: 82, 185, 112
  Most Active Group of Users: 209, 554 and 1087