How can we increase revenue from Catch the Pink Flamingo?

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Problem Statement

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

- The data will tell the behaviors of gamers, their habits, their needs, their preferences, how they are grouped by, which user are the most active, the leaders, the big spenders etc
- 2 main sets of data : in-game data & chat data
- In-game data set : covers info of/on Ads, Buys, Users, Team, Sessions, User game's accuracy
- Chat data set : covers info of/on Creation, Joining, Leaving, Mentioning, Answers of a chat session or a chat subject or a chat User.

Thanks to the sets of data the game is generating Eglence Inc can improve its marketing, commercial and the over whole economy of its business. Why ? The data will tell the behaviors of gamers, their habits, their needs, their preferences, how they are grouped by, which user are the most active, the leaders, the big spenders etc….Learning, knowing and finally acknowledging all those informations will lead Eglence Inc to data-driven decisions to better, improve their revenues in a significant way.

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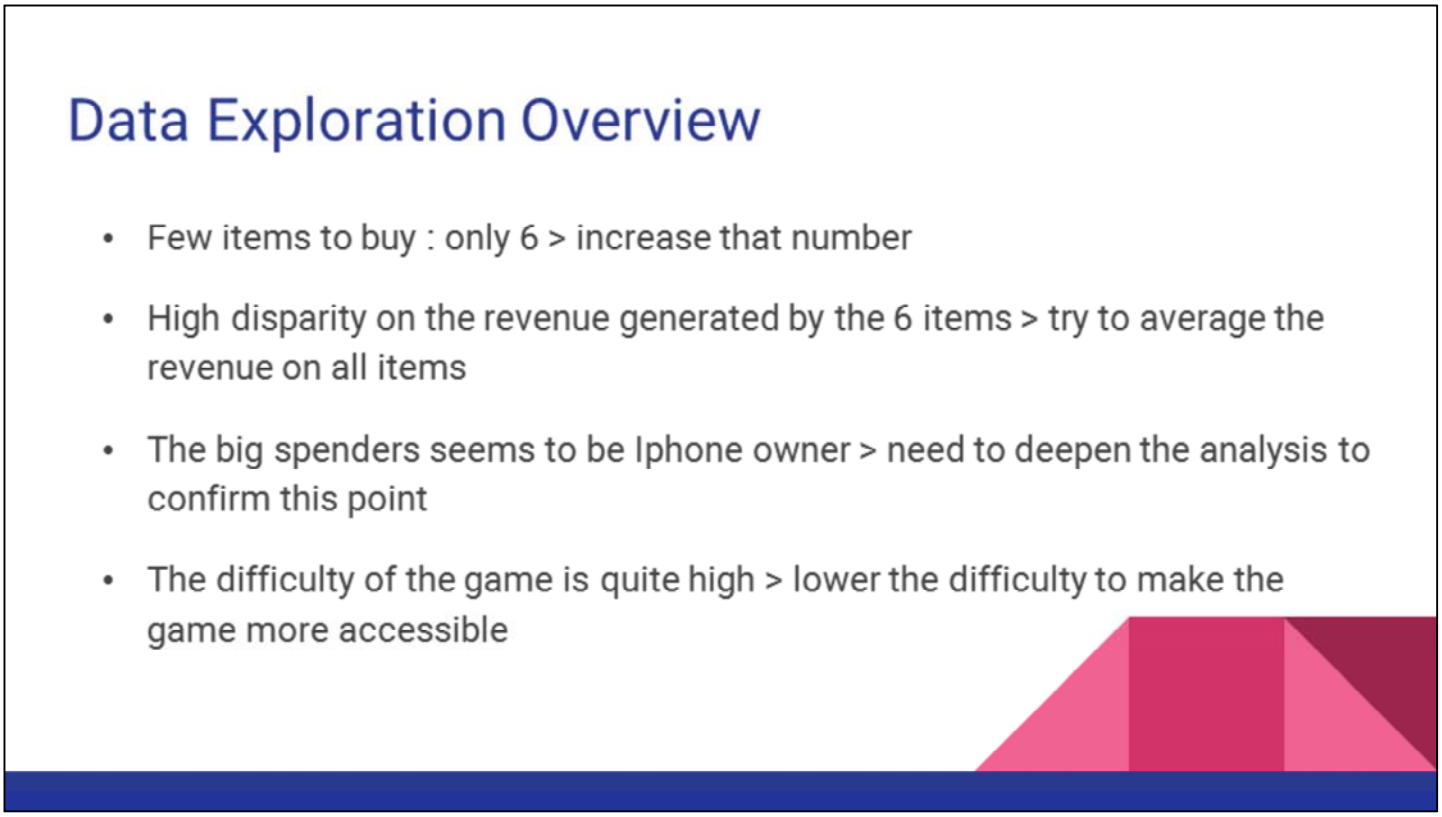


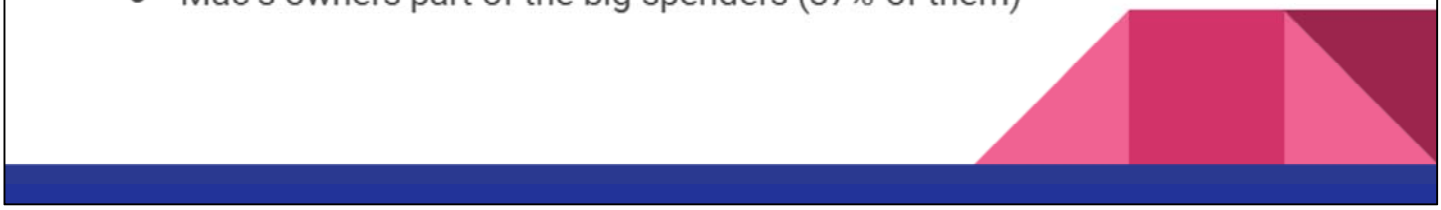
The data exploration tells us that
The game counts only few items to buy : only 6 we recommend to increase that number
There is a high disparity on the revenue generated by these 6 items we recommend to average the revenue on all items
The big spenders seems to be Iphone owner we need to deepen the analysis to confirm this point and will do on cluster analysis
The difficulty of the game is quite high we recommend to lower the difficulty to make the game more accessible to more population

What have we learned from classification?

- Creation of 2 new categories of Users :
  - the ones who spent 5 or less
  - the ones who spent more than 5.

Applying a Decision Tree learning Algorithm (88% of accuracy) :

- The big spenders = Iphone owners (83% of them)
- Mac's owners part of the big spenders (37% of them)



Here we separate the users into 2 new categories :

1/ the ones who spent 5 or less

2/ and the ones who spent more than 5.

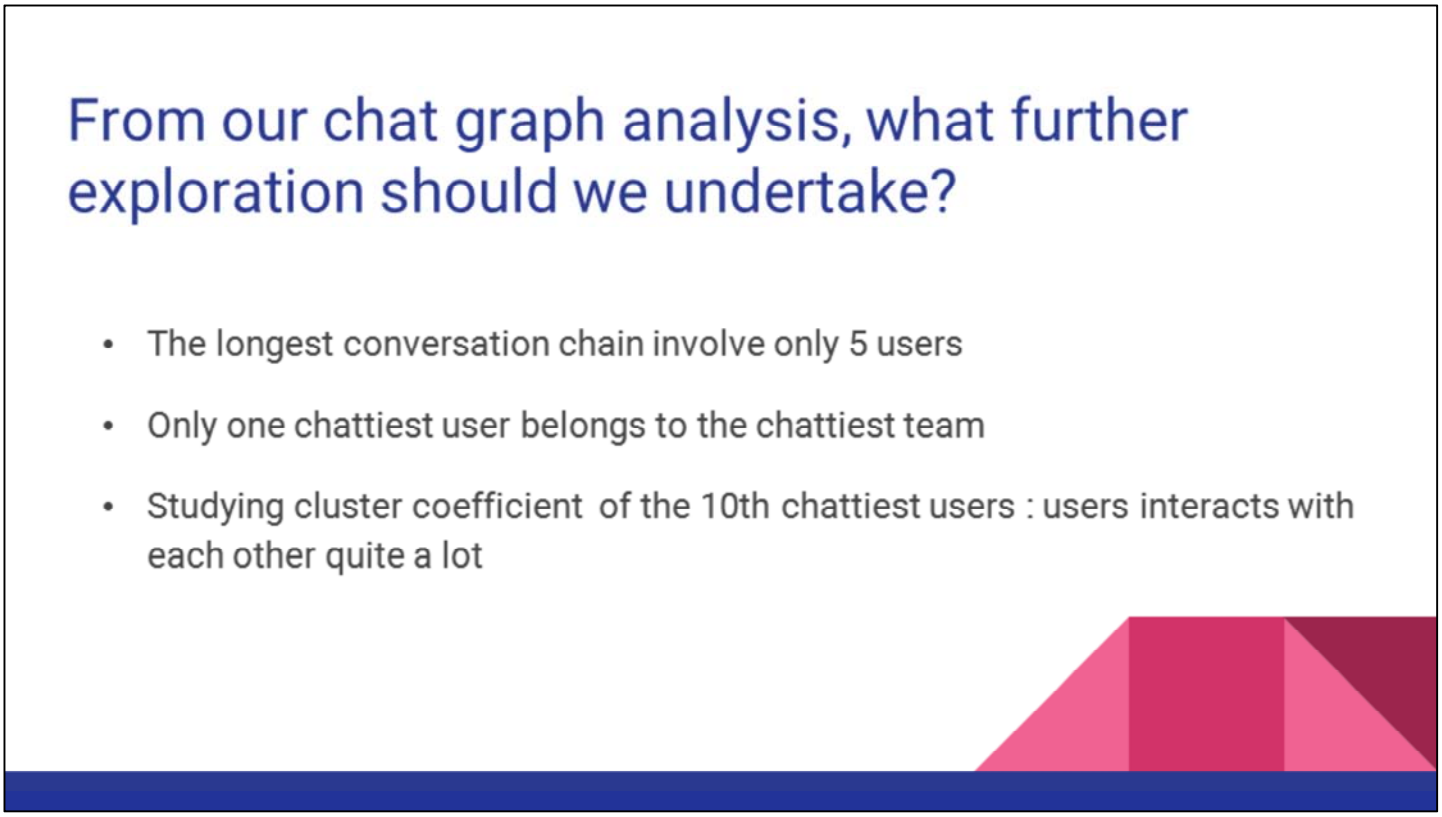
Applying a Decision Tree learning Algorithm , with 88% of accuracy we can affirm that :

1/The big spenders are the Iphone owners , 83% of them are

2//Mac's owners also represent a important part of the big spenders as 37% of them are

We decided to study these categories or mixed categories :
Sum of Ad Clicks by user , Sum of Money Spent by User and Click Accuracy and Sum of Money Spent by the frequency of user's session

We found 3 groups or cluster of users :
The New or infrequent users : they have few sessions and spend money only a little
The Intermediate Users : they have an average number of session, an average of money spent, but they're quite frequent ads-clickers
The Best players and Big Spenders : they spend and play the most, they're the main source of the revenue



The longest conversation chain involve only 5 users we should encourage more users to join conversation and continue the conversation

Only one chattiest user belongs to the chattiest team : we should recommend teams following users chat activity

We want to see if users interacts with their buddy for that we'll study cluster coefficient of users of the 10th chattiest users : we see that users interacts with each other quite a lot and should encourage to continue to so.

Recommendation

From the clustering analysis :

Users going from 8 to 12 sessions spend 8 times more money : Eglence Inc. need to insure that those 8 sessions users stay 4 more sessions.

Better aimed ads, bonuses, lowering the difficulty during this period of time etc ... everything needs to be done in order to keep those news users.