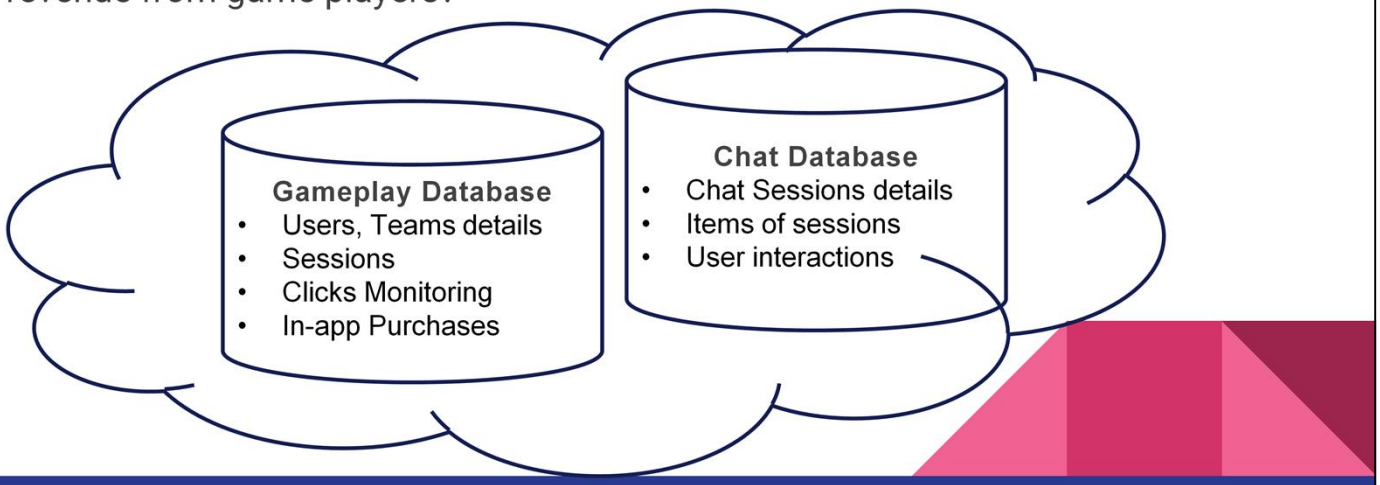
How can we increase revenue from Catch the Pink Flamingo?

Kyu Cho

Problem Statement

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



As we can see, Eglence provided us two main datasets to be analysed, the different data sources provides information on the user behaviour during the game play and information of the chat data related to game. The use of two datasources with several data are important to have a variety of data required for a bigdata analysis.
With the details of users activity we can easily track the characteristics to target our marketing according to the users interest, also taking meaningfull actions to increase our income analysing the different groups of users.

Data Exploration Overview

Total : $ 21.407,00

- Most sold Items : 0, 2 and 5
- Lowest Income : Item 0 and 1
- Most lucrative : Item 5 and 4
- Low popularity / Low income : Item 1
- Iphone users as the top spenders.

During the data exploration we've identified that the total amount of money spent by the users on in-app purchases was $ 21407,00 having six unique items available.
For the six Items we've produced a histogram showing the amount of sold items and the Income generated. Trough a performance analysis we could identify that the most efficient Item is the number 5, and we could see that even with a good popularity, we have low performance of items 0 and 1.
Additionaly, analysing the platforms used by the most buying users we could see that Iphone users are more willing to buy in game items.

What have we learned from classification?

- KNIME decision tree workflow used.
- Users classified as **“HighRollers”** (spent **more than $5**) and **“PennyPinchers”** (spent **less than $5**).
- **Platform type** identifyed as the most important attribute.
- **Iphone** users classified as “HighRollers” in 93% of the cases.

As we could see on our Decision Tree, the Platform Type is the most important attribute to
distinguish the HighRollers and PennyPinchers.
Iphone users made the most HighRollers in the list showing to be more willing to purchase more
expensive items in 93% of the cases.
In general, for the other platforms most of the users will be classified as PennyPincher, in
particular the Linux users in 96% of the cases are PennyPinchers.
The fact that Iphone is usually more expensive than the other platforms and heavily linked to
status and feelings, it may attracts people more open to spend or people with more
purchasing power in comparison to other platforms.

What have we learned from clustering?

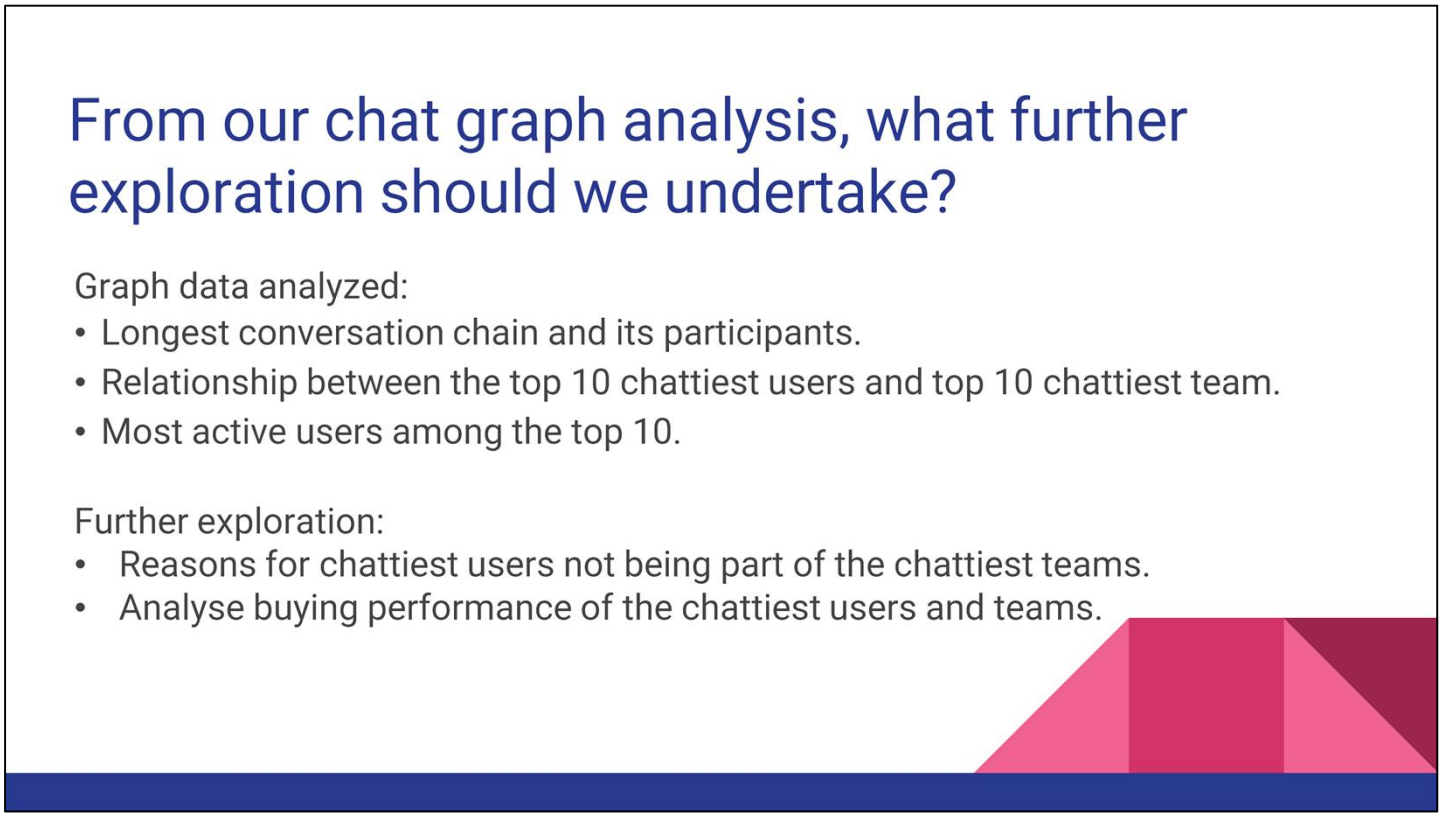
Attributes annalysed:

- Age groups : Most revenue with 38 to 40 yrs users, low revenue below 29 and above 56 yrs.
- Number of sessions played : Confirmed that more sessions are related with more revenue.
- Number of AdClicks : Separating the users in two clusters we are able to target our actions on the cluster who spent more money.

Clustering analysis have been done in Spark using Kmeans method.
Tree attributes have been selected to compare their impact on the amount of money users spent in game.

Age Groups : Selected based on the fact that the age may affect the purchase power in game.
Count of Sessions : Users with more sessions are expected to spend more money.
Count of AdClicks : Users classified as frequent clickers also have more buying activity.

We have been able to separate clusters with high and low performance which can be used to take actions to increase game revenue.



Trough the graph data model we could analyse the following details of the chatting activity in the game:

- Longest conversation chain and its participants.
- Relationship between the top 10 chattiest users and top 10 chattiest team.
- Most active users among the top 10.

From the information collected we could notice that only one of the most active users are part of the most active teams.
As further exploration we may look for the reasons that those users are not interacting with those teams, and what are the main characteristics of the team users and the top users.
We can also analyze consumption behavior of those chattiest teams and users to have more actionable information to increase revenue.

Recommendation

- Target campains according to platforms, focusing on Iphone users, as they are more willing to buy items.
- Review the pricing of item 0, as is one of the most sold with low revenues.
- Further analyse the relationship of the most active teams and users with their consumption behaviour.
- Produce content packs, exclusive items targeting the most active users.

From our classification analysis:

- Consider another approach for Android users, like in-app prompts that remind customers to leave reviews, or give coupons, monitoring the users reactions.
- For Iphone users we can make content packs with more exclusive and expensive itens.
- Make sure to re-connect with customers, reminding them of the app's presence in their
  device, also giving discounts, rewards, etc.
- Analyze consumption behavior of those chattiest teams and users, the information may be relevant to take further decisions.