


# How can we increase revenue from Catch the Pink Flamingo?

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# Problem Statement

- Where are we making money today?  
Where is our ad revenue coming from?
  - Who's purchasing products?  
What is the demographic of users spending money?
  - How to make more money tomorrow?  
Understand our highest spenders  
Understand our influencers
  - Our mission: understand the data!
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Fill in appropriate/key data set descriptions.

In your script, be sure to make clear how this is a data science story. State in your own words YOUR opinion of why the different kinds and sources of data are so important for Eglenge to be able to identify new revenue opportunities.

In order for us to determine how to increase revenue tomorrow, we need to understand how we make our money today.

- Who is buying our products?
  - What operating systems do they use?
  - What time to the make purchases?
  - What are the characteristics of our profitable users?
    - How often do they play?
    - Are they involved in the community?

Once we understand how we make money today, revenue opportunities will become clear. This presentation will show, with data, how we can increase revenue.

It's all about data science. We need to collect, analyze, test, and iterate on our data science strategy. Our revenue is a result of the overall game experience. By better understanding our user's behavior, sentiment, and characteristics, we can materially increase our revenue.

# Data Exploration Overview

- User characteristics
  - Mobile! 80% our users are iOS / Android
  - iOS! iOS users purchase expensive products
- More ad clicks == more revenue
  - Why are users clicking ads? How to make them click more?
- Chatty users != chattiest teams
  - Our influencers (chattiest users) are not on highly active teams

The data shows that:

- User characteristics:
  - The vast majority of our users are on mobile.
  - iOS users spend more than Android users.
  - More market research could be done to understand platform demographics and target ads, product features (iCloud / Google Drive) integration.
- Ads
  - Users who tap ads spend more money!
  - Ads work, need to research what ads work and why they are working.
- Influencers
  - Influencers are teams or users who can influence others.
  - By analyzing chat behavior, we can begin to understand who our influencing teams are.
    - Our chattiest users are \*not\* on the chattiest teams.
    - We could direct ad campaigns or new product features at our chattiest users / teams.

## What have we learned from classification?

- Our goal : understand the characteristics of “high rollers”  
High rollers spent on average > \$5.00 per purchase
- Results  
The user’s platform was the best factor in determining “high rollers”  
iOS and Android users account for 90% of all users  
iOS users are “high rollers”  
All other platforms are “penny pinchers”

What is classification?

- Grouping users into multiple categories.
- In our case “high rollers” who spent on average > 5.00 per item.

Why classification?

- Determine what characteristics are important to determine a user’s category.
- In our case, we found that iOS users are more likely to purchase expensive items.

Next steps

- Split users into other categories.
  - “Ad clickers” vs. non-ad clickers
  - Frequent players vs. casual players.
- Use this information to target ad campaigns, new product features.

## What have we learned from clustering?

- Our goal : understand if ad clicks result in purchases.  
If ad clicks are not resulting in purchases, our ads are ineffective.
- We clustered users based on ad clicks and total revenue  
Users who click more ads purchase more products.
- Conclusion  
Higher click rates == more revenue.



### What is clustering?

- Putting users into multiple groups (clusters) based on characteristics.
- Tells us if there are correlations between different groups

### Why clustering?

- Tells us if there are correlations between different groups
- Shows trends

### Conclusion

- We clustered users by ad clicks and revenue.
- Goal was to determine if ad clicks resulted in more revenue.
- The clusters showed us that ad clicks and revenue are related. Higher ad clicks == higher revenue.
- Get users to click ads!

## From our chat graph analysis, what further exploration should we undertake?

- Results from our chat analysis
  - Chatty users are not on chatty teams!
  - Tells us that chatty teams are very connected, insulated teams.
  - Chatty users (influencers) frequently talk outside of their teams.
- Further action
  - Understand the characteristics of chatty teams. Make all teams chatty!
  - Understand chatty users – what makes them chatty?

What did our chat graph analysis show?

- Our chat graph analysis showed us that the most chatty teams did not include the most chatty users.
- Why is this important?
  - Chatty teams are very insulated – they chat amongst themselves.
  - The chattiest users chat across teams.
- Further analysis
  - Chatty team analysis
    - What makes a team chatty?
    - Replicate this to all teams – assuming chatty teams are more loyal to the game.
  - Chatty user analysis
    - What are the characteristics of chatty users?
    - Why are chatting outside their team? How are they finding these chats?
    - Are they influencers we could target with ads?

# Recommendation

- Be a data driven company

Recommendation : Be a data driven company.

- This analysis gives us concrete actions we can take to improve revenue
  - Target iOS users
  - Target influencers
  - Test ad campaigns, improve click rates
- What makes these discoveries possible is data science.
  - Invest in data science
  - Use data to drive product decisions
  - Iterate – data science is never done

**Establishing the mindset and focus on being data driven is your competitive differentiator**