CASE STUDY: GOOGLE PLAY APP STORE

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Q1: Which category of app has the best ratings?

- In order to decide this, we first need to define what ‘best ratings’ could mean.

- The ‘Rating’ column provides us each app’s average rating. We could simply average these for each category and call the highest rating the ‘best.’

- However, this would not provide an accurate view of a category’s ratings.
  - For example, imagine a category with two apps. App A has 1000 ratings and an average rating of 4 stars. App B has 1 rating and an average rating of 5 stars.
  - If we simply average the average ratings of app A and app B, we get 4.5.
  - But the category overall has far more 4-star ratings than 5 star.

- We need some way to take into account both an apps average rating *and* the total number of ratings it has received.

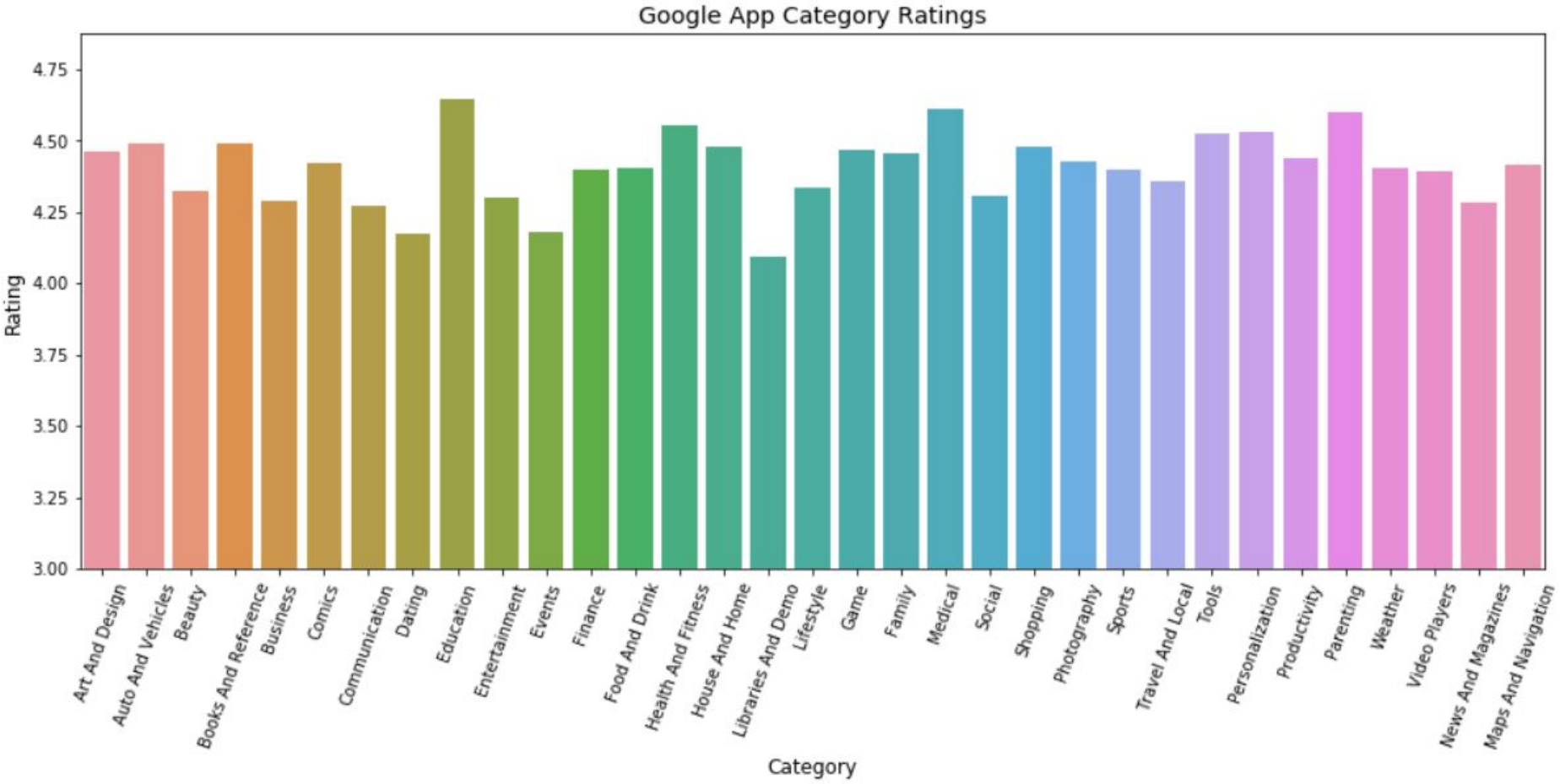
Q1 continued

To find the average rating of apps in a category (as opposed to the average of average ratings), we do this:

1. For each app in the category, multiply app rating * number of reviews.
2. Sum these up.
3. Divide by the total number of reviews in the category

The category with the highest average rating from this approach would be the ‘best’ rated category, i.e., it would have the highest average ratings.

Compared to the more naive approach discussed previously, this lowered the ratings of categories like business and comics, but raised the ratings of categories like art and beauty.


Google App Category Ratings
Rating
4.75
4.50
4.25
4.00
3.75
3.50
3.25
3.00
Art And Design
Auto And Vehicles
Beauty
Books And Reference
Business
Comics
Communication
Dating
Education
Entertainment
Events
Finance
Food And Drink
Health And Fitness
House And Home
Libraries And Demo
Lifestyle
Game
Family
Medical
Social
Shopping
Photography
Sports
Travel And Local
Tools
Personalization
Productivity
Parenting
Weather
Video Players
News And Magazines
Maps And Navigation
Category

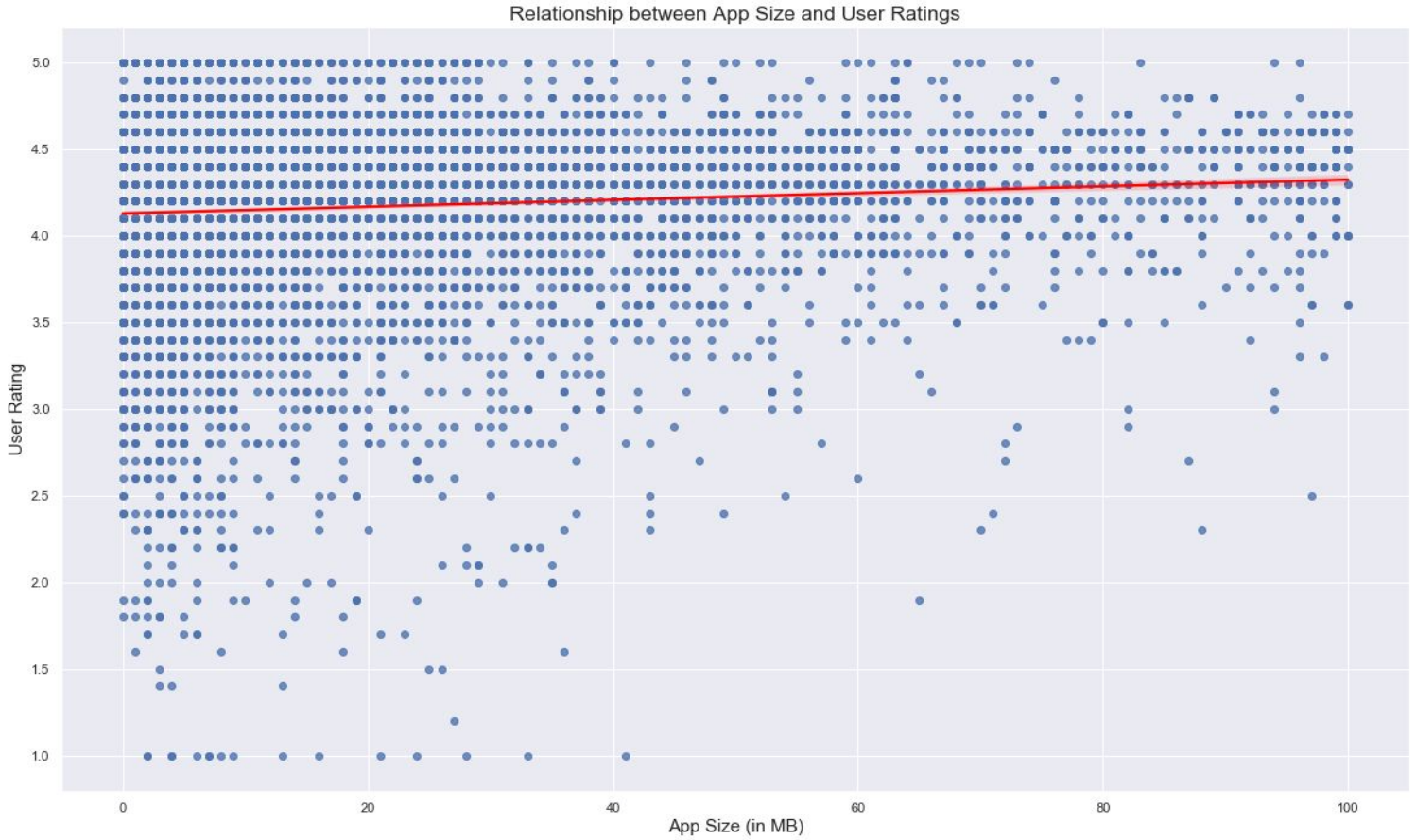
Q1 Key Takeaways

1. Education, Medical, Parenting, and Fitness apps were the highest rated overall.
2. Dating, Libraries & Demos, and Events apps were the worst rated.
3. We could conclude from this that a good dating app is quite hard to make, or that people using dating apps often find them frustrating.
4. On the other hand, apps that focus on self-improvement often have high ratings. This is perhaps because they put their users in a good frame of mind.
5. If we were looking to develop a new app, we could try to create a good dating or Libraries & Demos app, as there seems to be a void there to fill.
6. But that is a hard nut to crack; an easier option would be to create an education-oriented app.

Q2: Is there a relationship between ratings and size?

This analysis uses a scatter plot to explore if there is a relationship between app size and the ratings an app receives from its users.

Disclaimer: The dataset includes ratings for one-size-fits-all apps and apps that come in different sizes for different devices. This analysis focuses only on apps that come in one size for all devices, excluding rating data for sizes that vary with the device.


Relationship between App Size and User Ratings
User Rating
App Size (in MB)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0
20
40
60
80
100

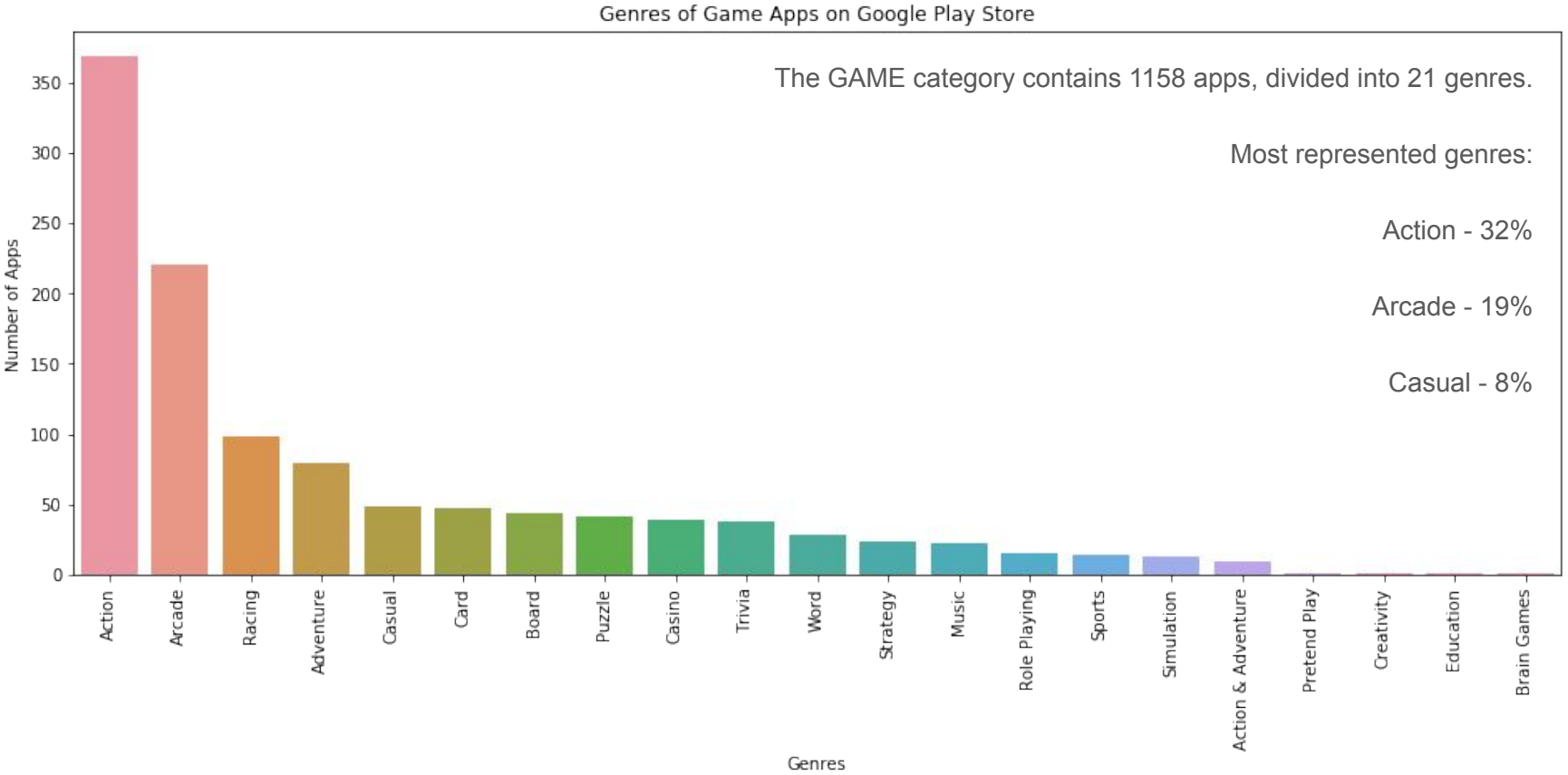
Q2: Key Takeaways

- The plot shows a negligibly positive association between the variables; thus, there appears to be no apparent relationship between app size and user rating.

- Many factors can influence user ratings, and the average user might not be directly aware of the file size of the app they are rating. Factors like app performance and user experience are far more likely to have an impact on the rating.

- It's safe to assume that if you need to increase the size to make your app faster, more stable, and more user friendly, that bump in size will have no impact on your user rating in the Google Play app store.

Q3: How many genres are represented in the GAME category?



Q4: What kinds of apps are people willing to pay for?

- The vast majority of apps are not paid for (99.9% of installs are of free apps).

- Nonetheless, people are willing to pay for apps on occasion.

- If we can find out what kinds of apps people are willing to pay for, we will know what kind of app we should develop in order to profit from app purchases.

- Note that we do not have data on in-app sales or revenue from customer data sales. Those could factor into our decision, but are not directly readable from the data at hand.

Q4 Methodology

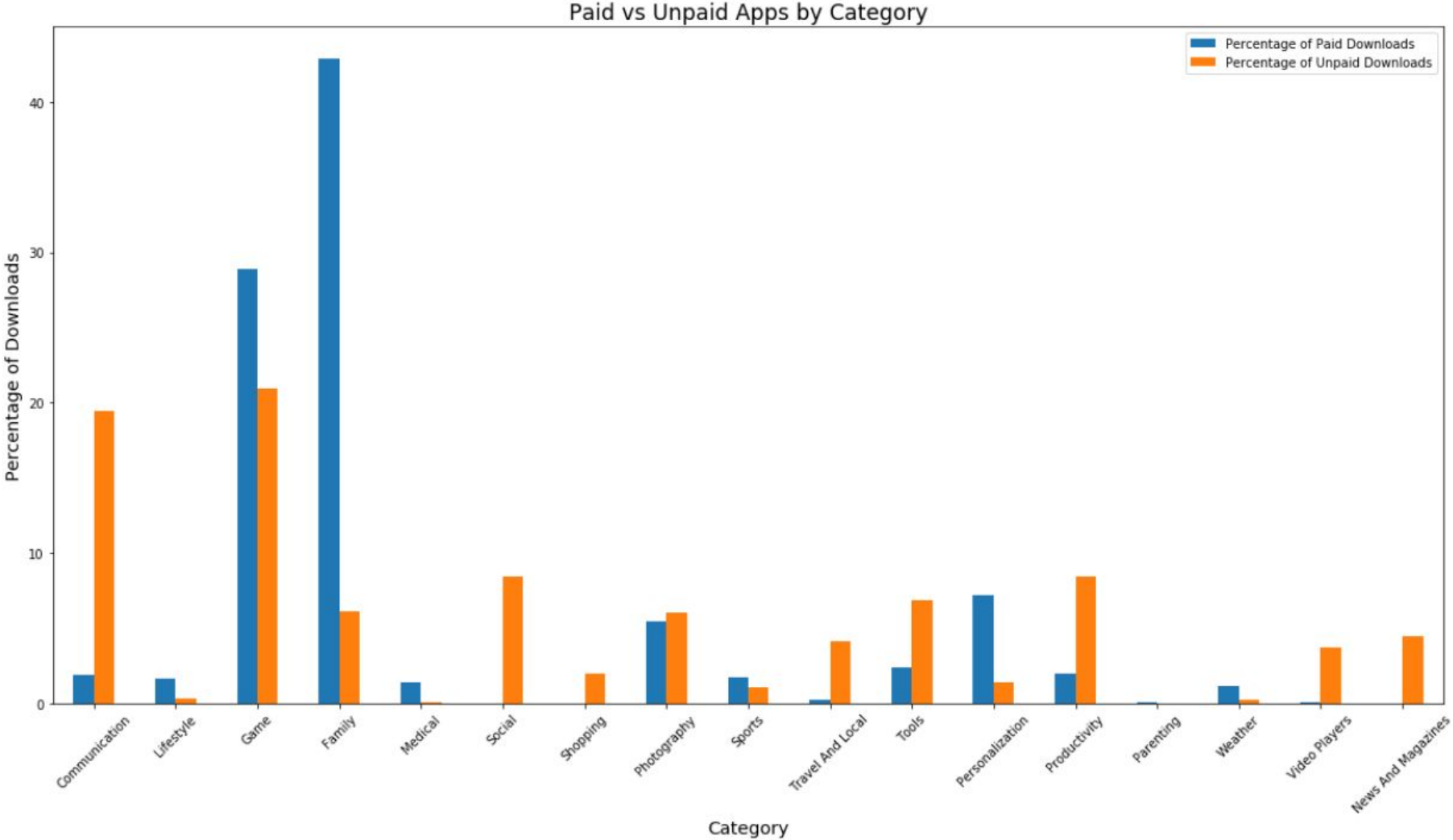
Discovering what kinds of apps people are willing to pay for took a couple steps.

First, we found the percentage of downloads for each category. This gives us a kind of baseline popularity for each category.

Second, we narrowed our focus to paid apps, and found the percentage of paid app downloads per category.

By comparing these, we can see which apps have an excess share of the paid downloads relative to their share of total downloads.

The results were interesting, and are displayed on the next slide. Categories without much contrast were excluded to reduce clutter.


Paid vs Unpaid Apps by Category
Percentage of Paid Downloads
Percentage of Unpaid Downloads
Percentage of Downloads
0
10
20
30
40
Communication
Lifestyle
Game
Family
Medical
Social
Shopping
Photography
Sports
Travel And Local
Tools
Personalization
Productivity
Parenting
Weather
Video Players
News And Magazines
Category

Q4 Key Takeaways

Five categories showed a major disproportionate share of paid downloads:

1. Family
2. Medical
3. Lifestyle
4. Personalization
5. Games (a distant 5th)

Of these, Family is by far the most popular category overall, and accounts for the greatest number of paid downloads.

While more information is still needed (eg. regarding average price of paid apps), this suggests that a Family-oriented app would be the best kind to develop if we are aiming to make money on app sales.