

# 22581340\_Apps

Gabriella Neilon<sup>a</sup>

<sup>a</sup>*Stellenbosch University*

---

## Abstract

In this report, I explored various aspects of mobile apps, including their earnings, user reviews, and sentiment analysis. I investigated the relationship between app categories, earnings, and user sentiment to gain insights into their interplay. Additionally, I examined the limitations and potential biases associated with relying solely on user reviews as a metric for app success.

---

## 1. Introduction

Mobile apps have become an integral part of our daily lives, offering a wide range of functionalities and entertainment options. Understanding the dynamics between app categories, earnings, and user sentiments is crucial for app developers, marketers, and decision-makers. In this analysis, I delve into the characteristics of different app categories and their implications for earnings and user reviews.

## 2. Part A

### Plotting Earnings by Category and Rating

Through an analysis of the apps data, I explore the relationship between app categories, ratings, and their respective earnings. The purpose of this analysis is to determine if ratings play a significant role in determining app earnings and to identify the top-earning categories.

The findings reveal an intriguing insight: ratings do not seem to be the sole determining factor for app earnings. Instead, we observe that certain app categories consistently outperform others in terms of earnings.

The top five app categories that exhibit the highest earnings are Family, Lifestyle, Finance, Games, and

---

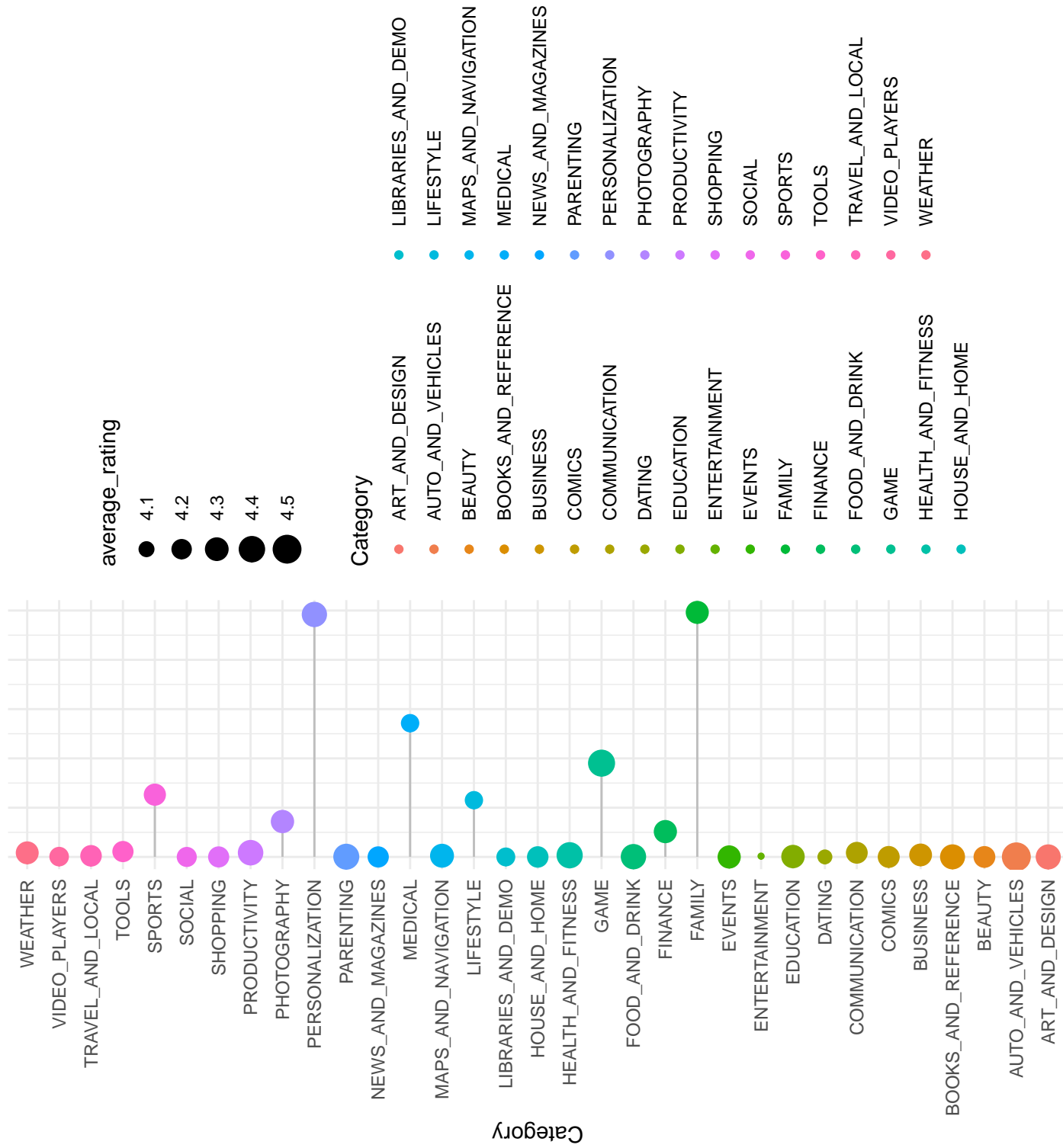
\*Corresponding author: Gabriella Neilon  
Email address: 22581340@sun.ac.za (Gabriella Neilon)

---

Photography. This information can be invaluable for developers, investors, and industry professionals seeking to make informed decisions about app development and monetization strategies.

Overall, this analysis highlights the significance of app category selection and the potential impact it can have on earnings. While ratings may influence user perception and adoption, it is ultimately the app category that plays a pivotal role in determining financial success.

Earnings by Category with Rating



---

### 3. Part B

#### Analysis of Sentiments and Reviews by Category

In this section, I delve into the sentiments expressed in customer reviews for the top five categories identified in the previous section. The analysis aims to shed light on the prevalence of positive, negative, and neutral sentiments within each category, providing insights into customer perceptions and experiences.

To begin, I quantify the number of positive, negative, and neutral sentiments for each category. This initial step allows us to understand the sentiment distribution and identify any significant patterns or variations across categories. Next, I explore the total number of reviews for each category. By considering the overall review volume, we gain a sense of the level of customer engagement and interest within each category. To gain a more comprehensive understanding, I calculate the percentage of positive, negative, and neutral reviews for each category by dividing the sentiments by the total reviews. This normalization allows us to compare sentiments across categories, considering the differences in review volume.

Based on the calculated percentages, I present a table that showcases the distribution of positive, neutral, and negative reviews as a percentage of the total reviews for each category. This table provides a concise overview of the sentiment composition within each category.

Despite Photography being the category with the least earnings among the five categories (Lifestyle, Family, Game, Finance, and Photography), it surprisingly receives the highest number of positive reviews. This finding suggests that relying solely on reviews as a metric may not be a reliable indicator for predicting prospective earnings. Other factors such as user preferences, marketing strategies, and market demand may play significant roles in determining the success of an app within a particular category.

Table 3.1: App Sentiment

	Category	Sentiment	Count	Total	Percentage
1	FAMILY	Negative	886	3440	25.755814
2	FAMILY	Neutral	361	3440	10.494186
3	FAMILY	Positive	2193	3440	63.750000
4	FINANCE	Negative	322	1491	21.596244
5	FINANCE	Neutral	217	1491	14.553991
6	FINANCE	Positive	952	1491	63.849765
7	GAME	Negative	2493	6643	37.528225
8	GAME	Neutral	290	6643	4.365498

---

	Category	Sentiment	Count	Total	Percentage
9	GAME	Positive	3860	6643	58.106277
10	LIFESTYLE	Negative	235	1196	19.648829
11	LIFESTYLE	Neutral	266	1196	22.240803
12	LIFESTYLE	Positive	695	1196	58.110368
13	PHOTOGRAPHY	Negative	254	1245	20.401606
14	PHOTOGRAPHY	Neutral	173	1245	13.895582
15	PHOTOGRAPHY	Positive	818	1245	65.702811

#### 4. Conclusion

The relationship between app categories, earnings, and user sentiment is complex and multifaceted. While positive reviews generally dominate across different app categories, it is crucial to consider additional factors such as user preferences, marketing strategies, and market demand when assessing the potential success of an app. A prime example is the category “Photography”, it had relatively lower earnings compared to other categories, but it surprisingly received the highest number of positive reviews. This discrepancy highlights the limitations of using user reviews as a sole metric for determining app success, as factors beyond reviews may influence the earnings potential of an app.