



Data Analysis Portfolio

Prepared By :



Professional Background:

I have a passion for excellence with a hunger for challenges. My analytical intuition and goal-oriented mindset help me to find creative solutions to any problem.

I work in the banking sector where I handled various job functions as a funds transfer officer, business development manager, risk analyst, customer service specialist and business analyst. I have also learnt soft skills in python programming and excel data visualization. With my bachelor's degree in polymer engineering and professional certification in financial control, I have acquired experience in several diverse fields.

Now I am on a mission to develop my machine learning, data science, and business management skills. Also, I am looking for opportunities to gain a global education to apply and deepen my knowledge. My goal is to build a platform that will provide data-driven business solutions to small and large-scale organizations.



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Udemy Data Analysis



Project Description:

- To better understand the pricing and subscriptions data of Udemy courses (for four different subjects) and identifying trends and patterns
- This will help us to:
 - Identify for which subject more courses should be created
 - Create targeted strategies to increase the company revenue



Key questions:

1. What are the total numbers of subscribers in each subject?
2. How does the average content duration/price/number of students vary across different subjects?
3. How many courses are free and paid for each subject?
4. What is the average price of web development courses at different levels?
5. What are the 20 most popular courses? Also, include the following information:
 - Their level
 - Whether they are free or paid
 - Whether any are free beginner courses,
 - and the duration of the courses.
6. Does content duration impact the price of the course?



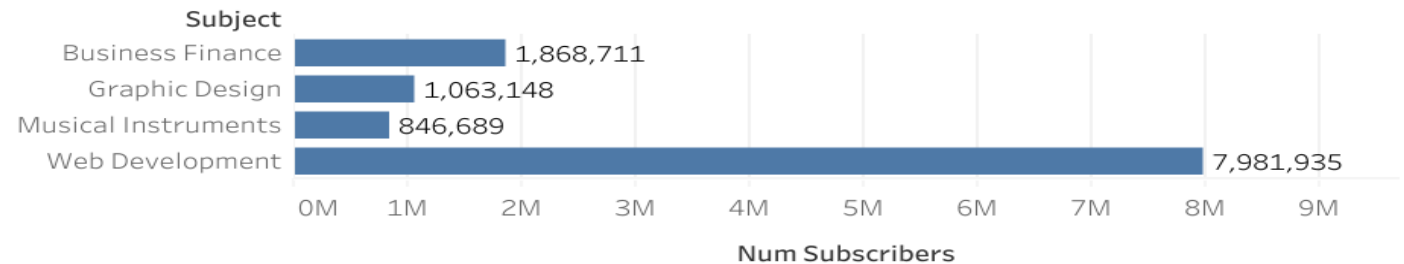
Findings & Insights



I. What are the total numbers of subscribers in each subject?

| <i>subject</i> | SUM of num_subscribers |
|---------------------|------------------------|
| Business Finance | 1868711 |
| Graphic Design | 1063148 |
| Musical Instruments | 846689 |
| Web Development | 7981935 |
| Grand Total | 11760483 |

Subjects vs Number of Subscribers

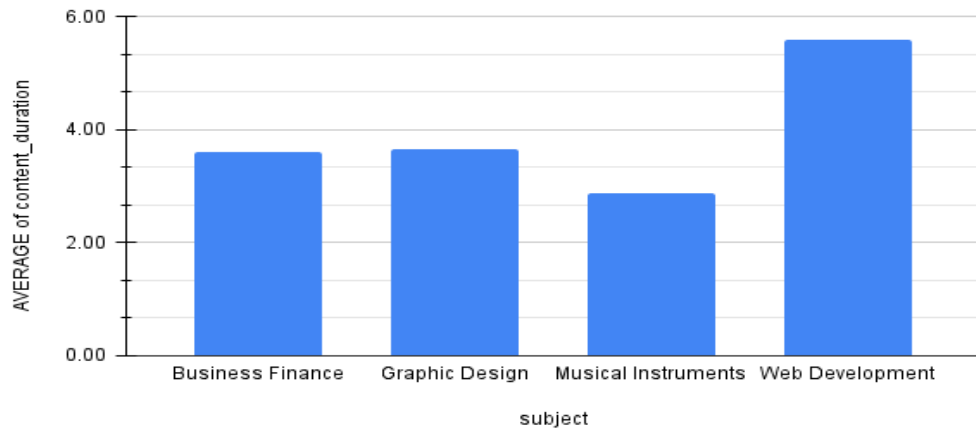


About 68% of customers subscribed for web development while 7% went for musical instruments.

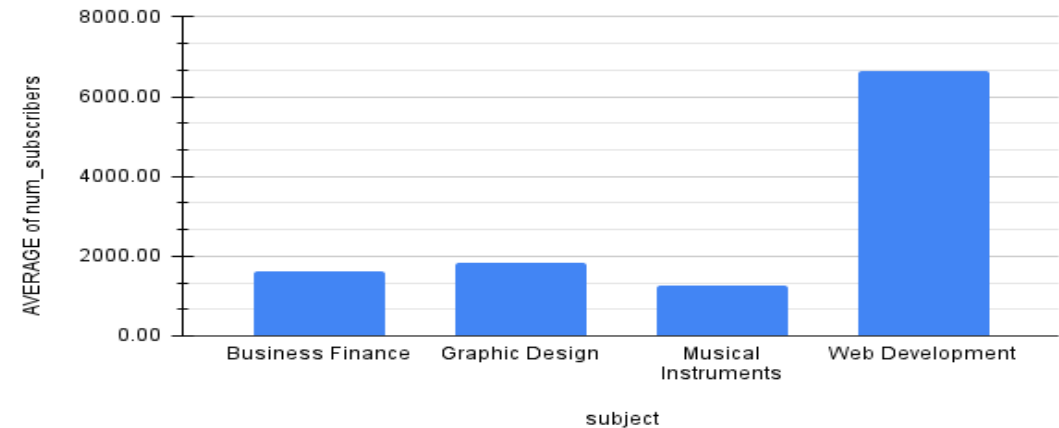


2. How does the average content duration/price/number of students vary across different subjects?

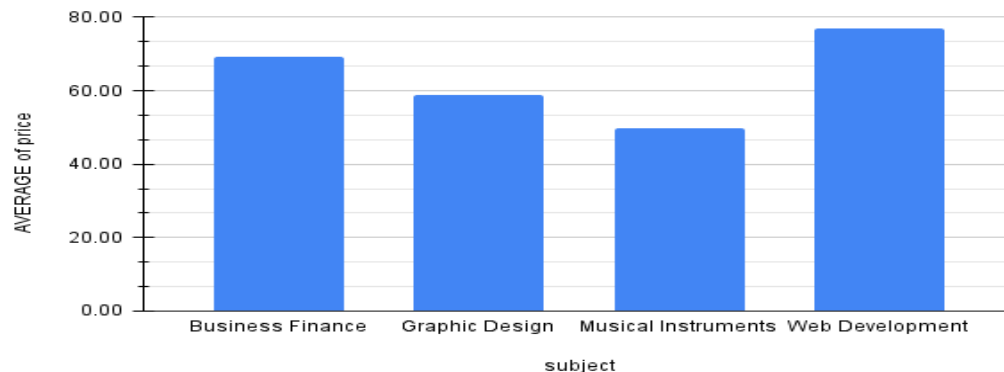
AVERAGE of content_duration vs subject



AVERAGE of num_subscribers vs subject



AVERAGE of price vs subject

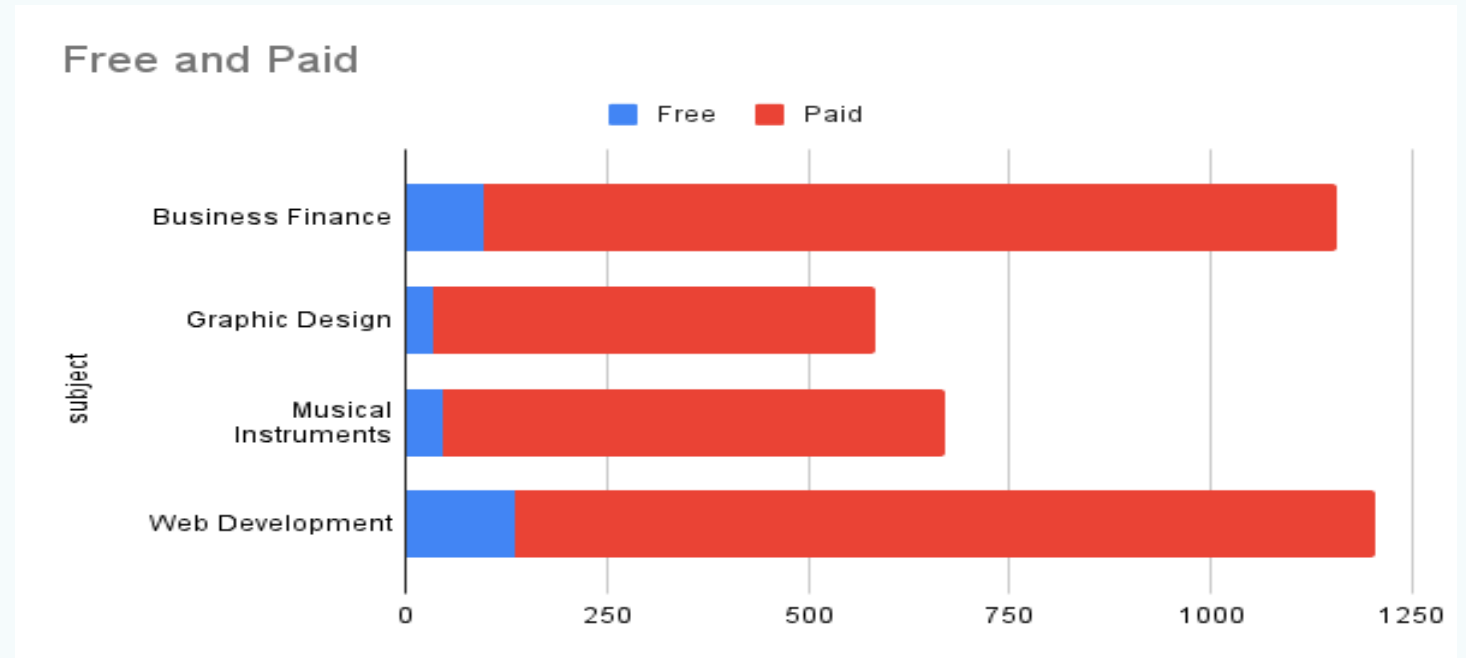


The analysis shows that subjects with high duration content will have higher number of subscribers and price. Web development with the highest content duration have the highest percentage of number of subscribers and price.



3. How many courses are free and paid for each subject?

| COUNTA of Free or Paid | | | |
|------------------------------|------|------|----------------|
| Free or Paid | | | |
| subject | Free | Paid | Grand Total |
| Business Finance | 96 | 1059 | 1155 |
| Graphic Design | 35 | 549 | 584 |
| Musical Instruments | 46 | 623 | 669 |
| Web Developme nt | 134 | 1069 | 1203 |
| Grand Total | 311 | 3300 | 3611 |



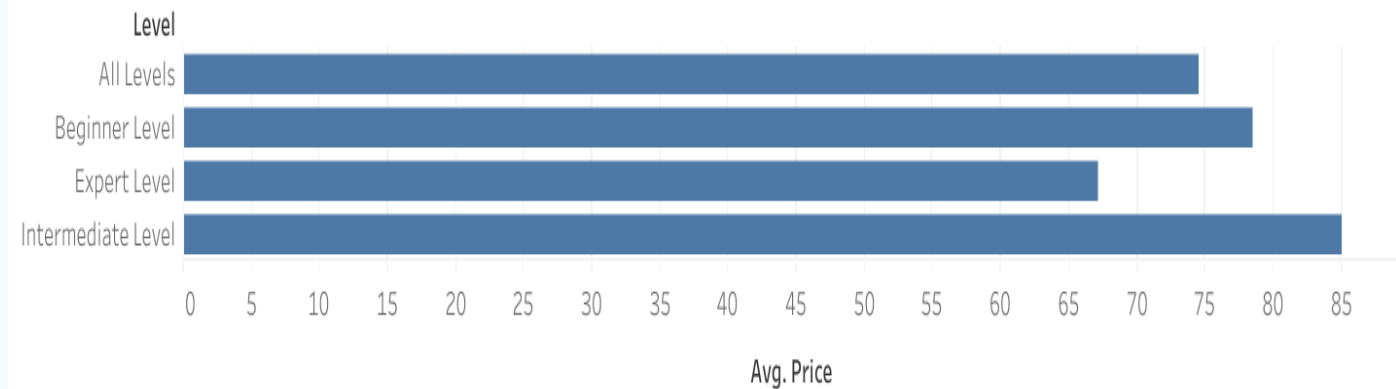
The table shows that 90% of the courses are paid for with web development while graphic design contributed about 32% .



4. What is the average price of web development courses at different levels?

| level | AVERAGE of price |
|--------------------|------------------|
| All Levels | 74.55 |
| Beginner Level | 78.54 |
| Expert Level | 67.14 |
| Intermediate Level | 85.07 |
| Grand Total | 77.04 |

Average price of web development at all levels



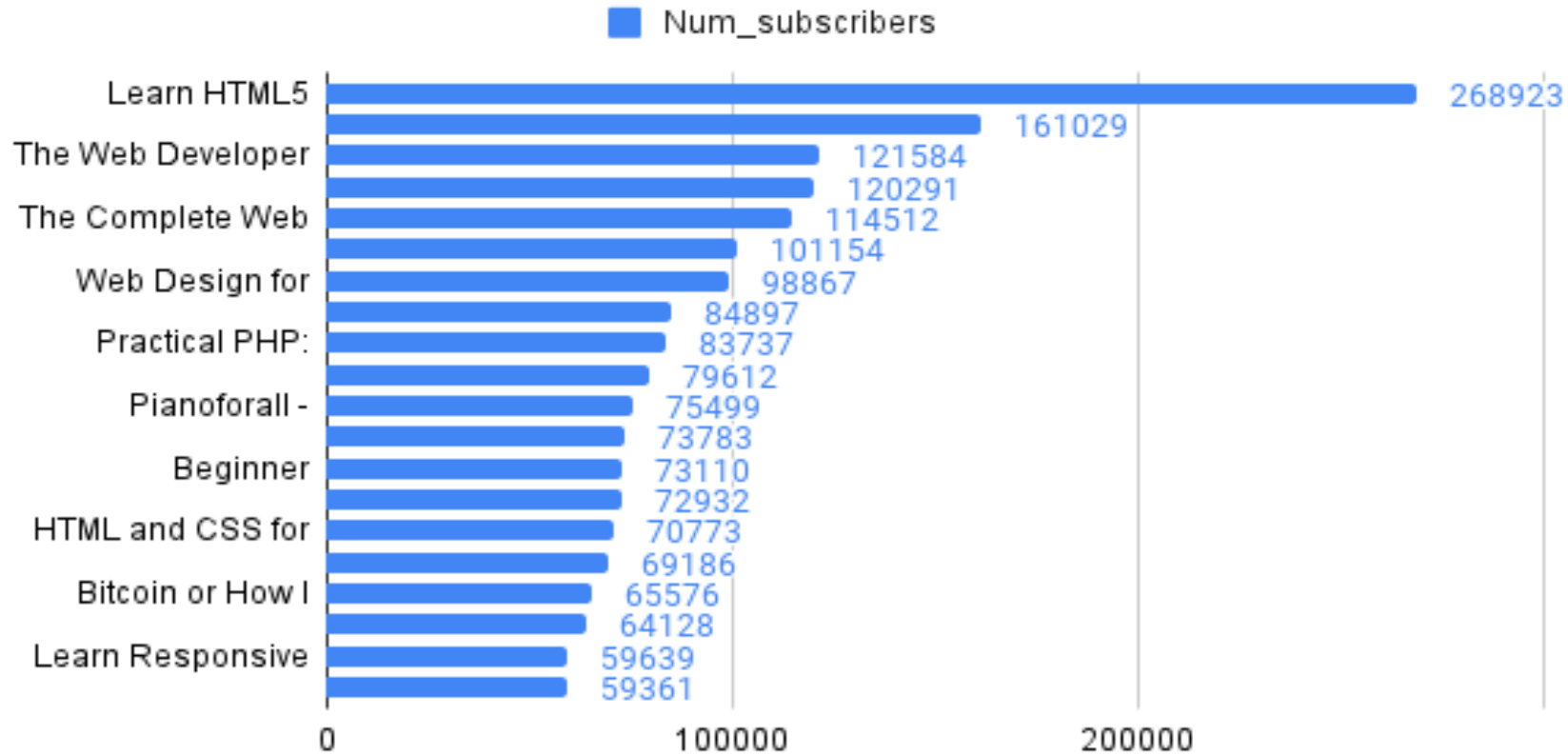
The Intermediate level of Web Development courses with an average price of 85.07 recorded the highest price compared to the other levels .



5. What are the 20 most popular courses?



Top 20 Courses



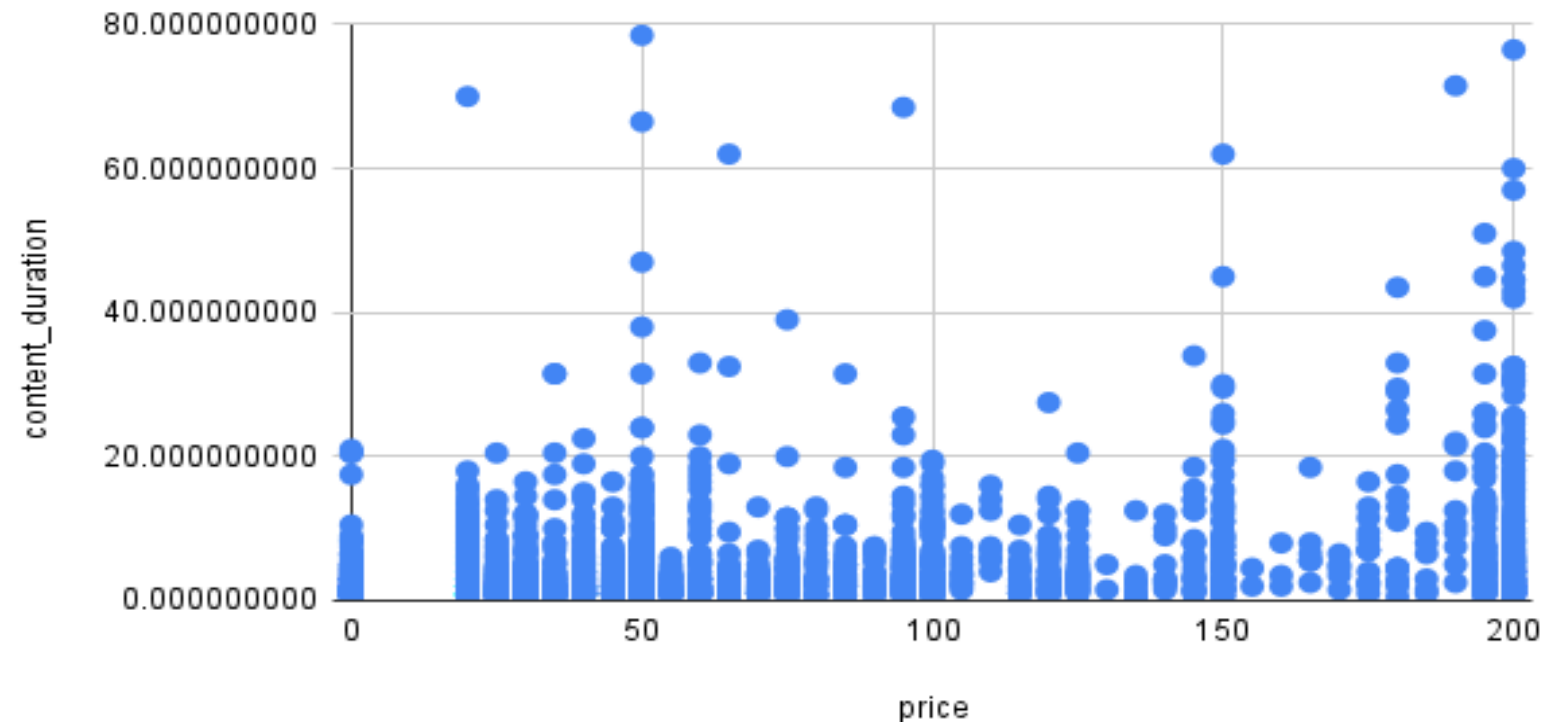
The chart shows that Web Development courses are more popular based on the number of subscribers.



6. Does content duration impact the price of the course?

The scatter plot shows that about 80% of the courses have content duration ranging from 1 to 40 and is not dependent on the price.

content_duration vs price





Summary of findings:

- **Top 5 courses:**
 - Almost 68% of subscribers come from Web Development and the top 5 courses are for Web development as well
- **Business Finance vs Web Development:**
 - Business Finance and web development have almost equal number of total courses (1155 vs 1203), but web development course are almost 2x in content duration and have 4x the average subscribers
- **Course Pricing:**
 - Web Development and Business Finance courses are have higher pricing with an average price of 77.04 and 69.08 respectively



Recommended actions:

Product recommendations:

- Focus on getting more paid course by creators in Web Development courses because of the high demand for them.

Marketing recommendations:

- Our data tells us that our web development courses are most popular and people are willing to pay for it. Marketing and advertising campaigns should therefore focus 80% of their attention on the Web Development target market.



Capstone Project



Project Description:

- The Google Play Store apps has enormous potential to drive app-making businesses to success. Actionable insights can be drawn for developers to identify trends and patterns and capture the Android market.
- This will help us to:
 - Identify which category of apps should be developed more by developers
 - Create targeted strategies to increase the installs for an app



Key questions:

- How many app do we have in each category?
- How many installs do we have in each category?
- Which apps are free and paid?
- Which category have the highest rating and reviews?
- How does price and installs vary across different category?

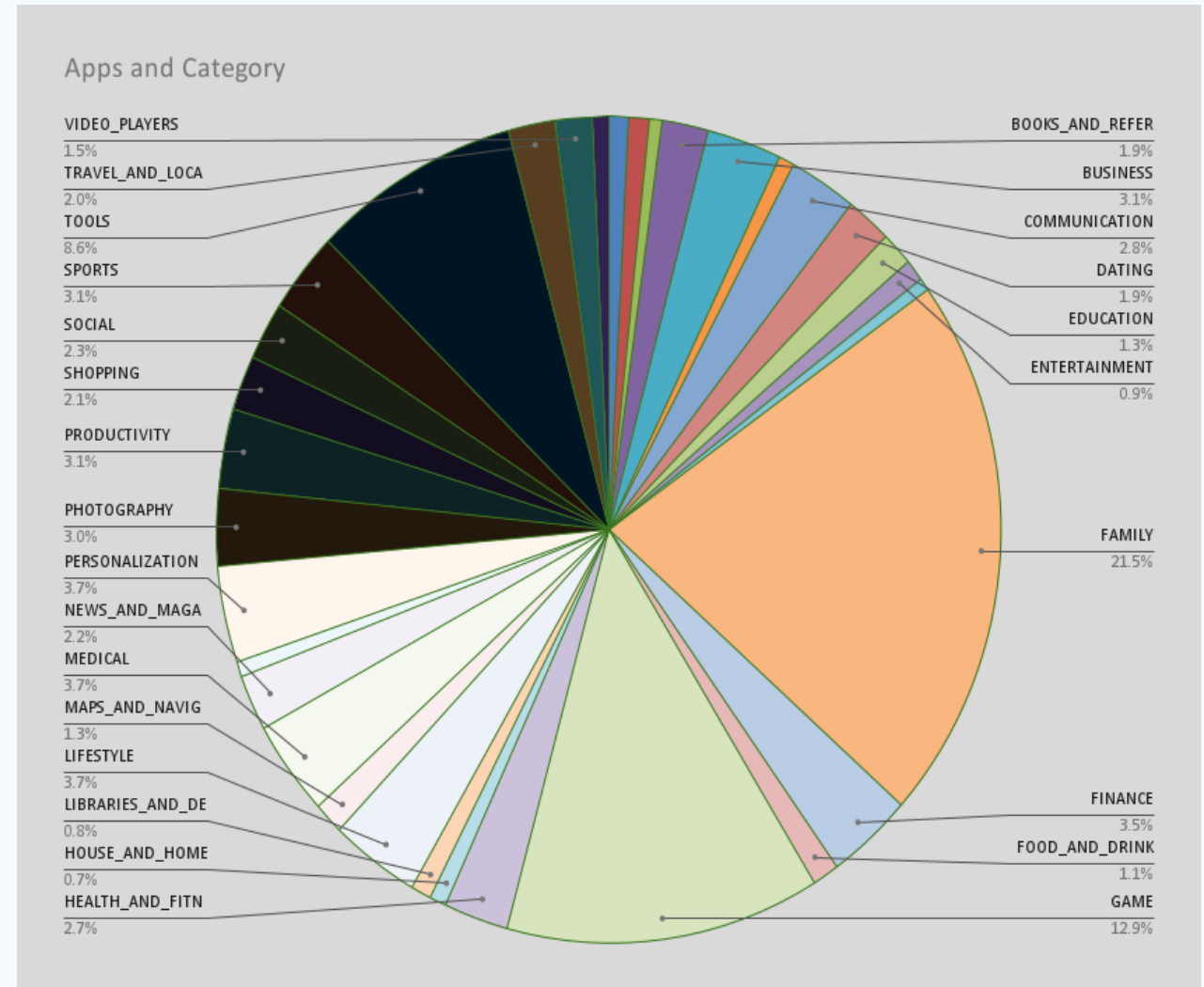


Findings & Insights



1. How many app do we have in each category?

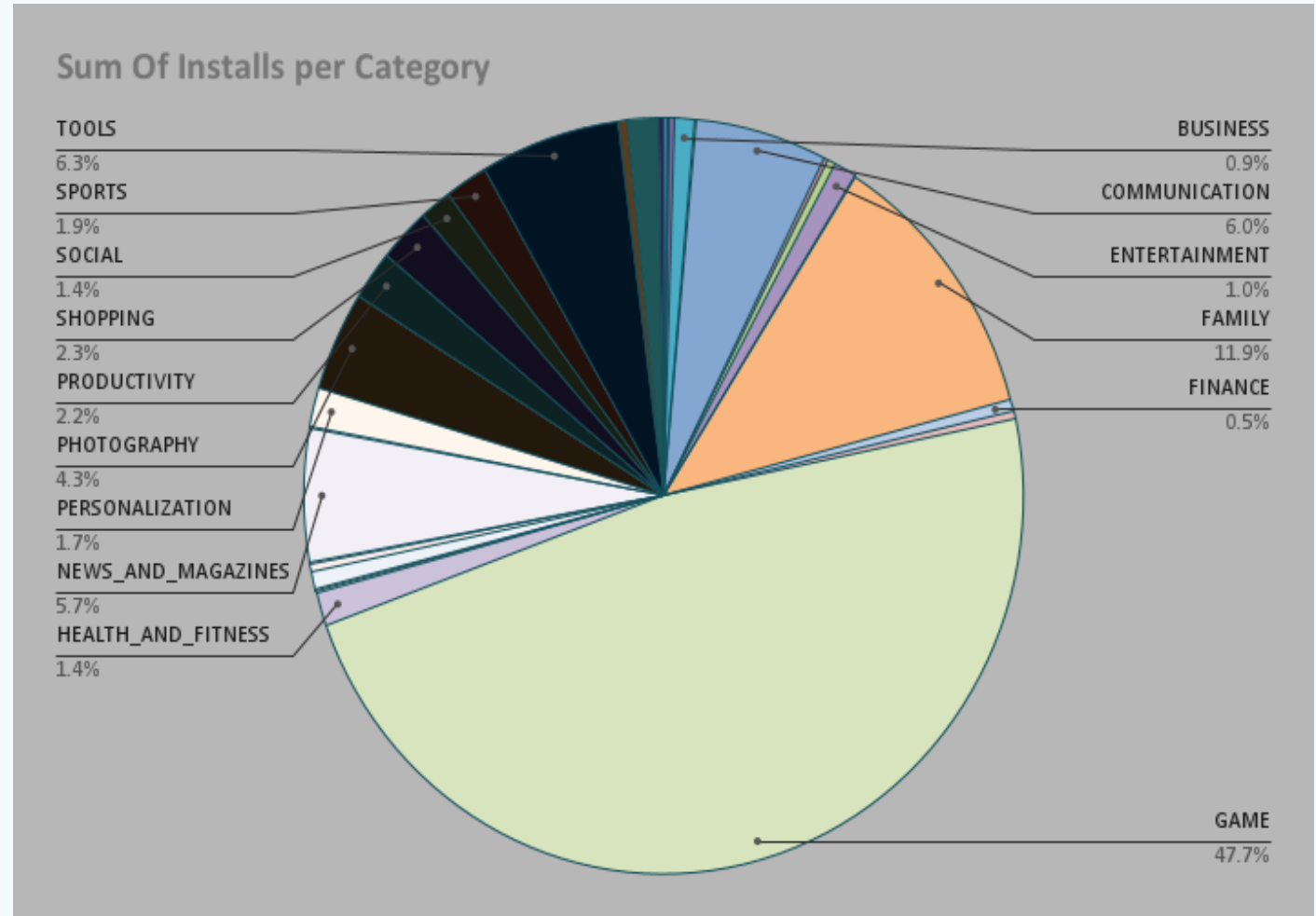
| Category | COUNTA of App |
|---------------------|---------------|
| ART_AND_DESIGN | 59 |
| AUTO_AND_VEHICLES | 63 |
| BEAUTY | 37 |
| BOOKS_AND_REFERENCE | 143 |
| BUSINESS | 225 |
| COMICS | 48 |
| COMMUNICATION | 204 |
| DATING | 141 |
| EDUCATION | 94 |
| ENTERTAINMENT | 64 |
| EVENTS | 36 |
| FAMILY | 1584 |
| FINANCE | 260 |
| FOOD_AND_DRINK | 82 |
| GAME | 954 |
| HEALTH_AND_FITNESS | 196 |
| HOUSE_AND_HOME | 50 |
| LIBRARIES_AND_DEMO | 62 |
| LIFESTYLE | 271 |
| MAPS_AND_NAVIGATION | 94 |
| MEDICAL | 276 |
| NEWS_AND_MAGAZINES | 161 |
| PARENTING | 44 |
| PERSONALIZATION | 276 |
| PHOTOGRAPHY | 224 |
| PRODUCTIVITY | 228 |
| SHOPPING | 158 |
| SOCIAL | 168 |
| SPORTS | 232 |
| TOOLS | 631 |
| TRAVEL_AND_LOCAL | 144 |
| VIDEO_PLAYERS | 113 |
| WEATHER | 49 |
| Grand Total | 7371 |





2. How many installs do we have in each category?

| Category | SUM of Installs(+) |
|-------------------------|--------------------|
| ART_AND_DESIGN | 99,233,100 |
| AUTO_AND_VEHICLES | 43,769,800 |
| BEAUTY | 13,416,200 |
| BOOKS_AND_REFERENC E | 134,784,155 |
| BUSINESS | 491,782,920 |
| COMICS | 16,536,100 |
| COMMUNICATION | 3,334,915,530 |
| DATING | 105,192,410 |
| EDUCATION | 207,702,000 |
| ENTERTAINMENT | 548,860,000 |
| EVENTS | 5,648,300 |
| FAMILY | 6,674,811,480 |
| FINANCE | 306,586,300 |
| FOOD_AND_DRINK | 171,567,750 |
| GAME | 26,732,252,717 |
| HEALTH_AND_FITNESS | 782,456,220 |
| HOUSE_AND_HOME | 51,482,000 |
| LIBRARIES_AND_DEMO | 60,983,000 |
| LIFESTYLE | 420,519,120 |
| MAPS_AND_NAVIGATION | 175,014,560 |
| MEDICAL | 35,450,176 |
| NEWS_AND_MAGAZINES | 3,204,900,550 |
| PARENTING | 23,566,010 |
| PERSONALIZATION | 942,042,930 |
| PHOTOGRAPHY | 2,380,893,130 |
| PRODUCTIVITY | 1,211,302,080 |
| SHOPPING | 1,312,231,540 |
| SOCIAL | 793,240,475 |
| SPORTS | 1,062,411,465 |
| TOOLS | 3,519,053,500 |
| TRAVEL_AND_LOCAL | 240,638,300 |
| VIDEO_PLAYERS | 781,662,200 |
| WEATHER | 119,296,500 |
| Grand Total | 56,004,202,518 |



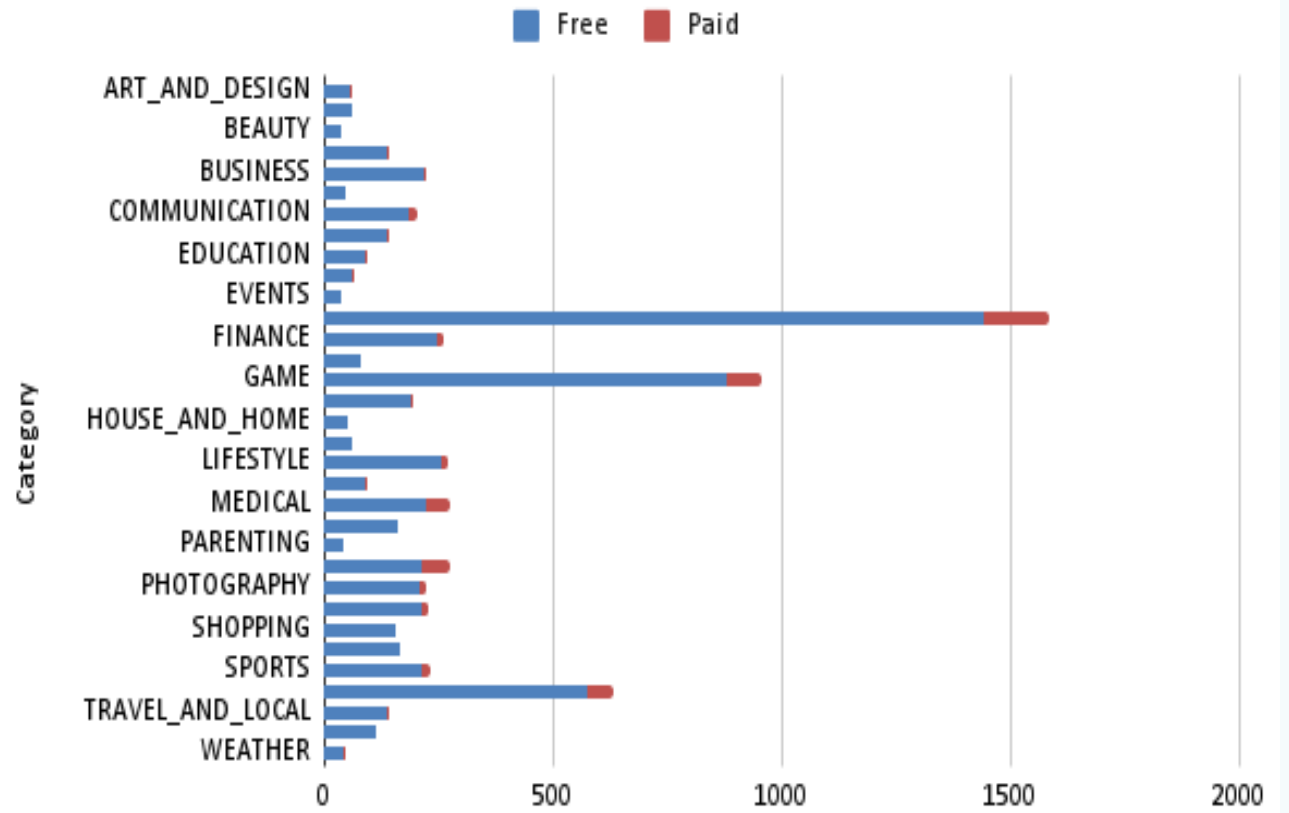
Game apps category recorded the highest installs by 47.7%.



3. Which apps are free and paid?

| COUNTA of Type Category | Type | | Grand Total |
|----------------------------|------|------|-------------|
| | Free | Paid | |
| ART_AND_DESIGN | 56 | 3 | 59 |
| AUTO_AND_VEHICLES | 63 | | 63 |
| BEAUTY | 37 | | 37 |
| BOOKS_AND_REFERENCE | 136 | 7 | 143 |
| BUSINESS | 217 | 8 | 225 |
| COMICS | 48 | | 48 |
| COMMUNICATION | 186 | 18 | 204 |
| DATING | 139 | 2 | 141 |
| EDUCATION | 90 | 4 | 94 |
| ENTERTAINMENT | 63 | 1 | 64 |
| EVENTS | 36 | | 36 |
| FAMILY | 1439 | 145 | 1584 |
| FINANCE | 247 | 13 | 260 |
| FOOD_AND_DRINK | 81 | 1 | 82 |
| GAME | 879 | 75 | 954 |
| HEALTH_AND_FITNESS | 188 | 8 | 196 |
| HOUSE_AND_HOME | 50 | | 50 |
| LIBRARIES_AND_DEMO | 62 | | 62 |
| LIFESTYLE | 255 | 16 | 271 |
| MAPS_AND_NAVIGATION | 90 | 4 | 94 |
| MEDICAL | 221 | 55 | 276 |
| NEWS_AND_MAGAZINES | 159 | 2 | 161 |
| PARENTING | 43 | 1 | 44 |
| PERSONALIZATION | 213 | 63 | 276 |
| PHOTOGRAPHY | 211 | 13 | 224 |
| PRODUCTIVITY | 214 | 14 | 228 |
| SHOPPING | 156 | 2 | 158 |
| SOCIAL | 166 | 2 | 168 |
| SPORTS | 212 | 20 | 232 |
| TOOLS | 576 | 55 | 631 |
| TRAVEL_AND_LOCAL | 138 | 6 | 144 |
| VIDEO_PLAYERS | 112 | 1 | 113 |
| WEATHER | 43 | 6 | 49 |
| Grand Total | 6826 | 545 | 7371 |

Free and Paid

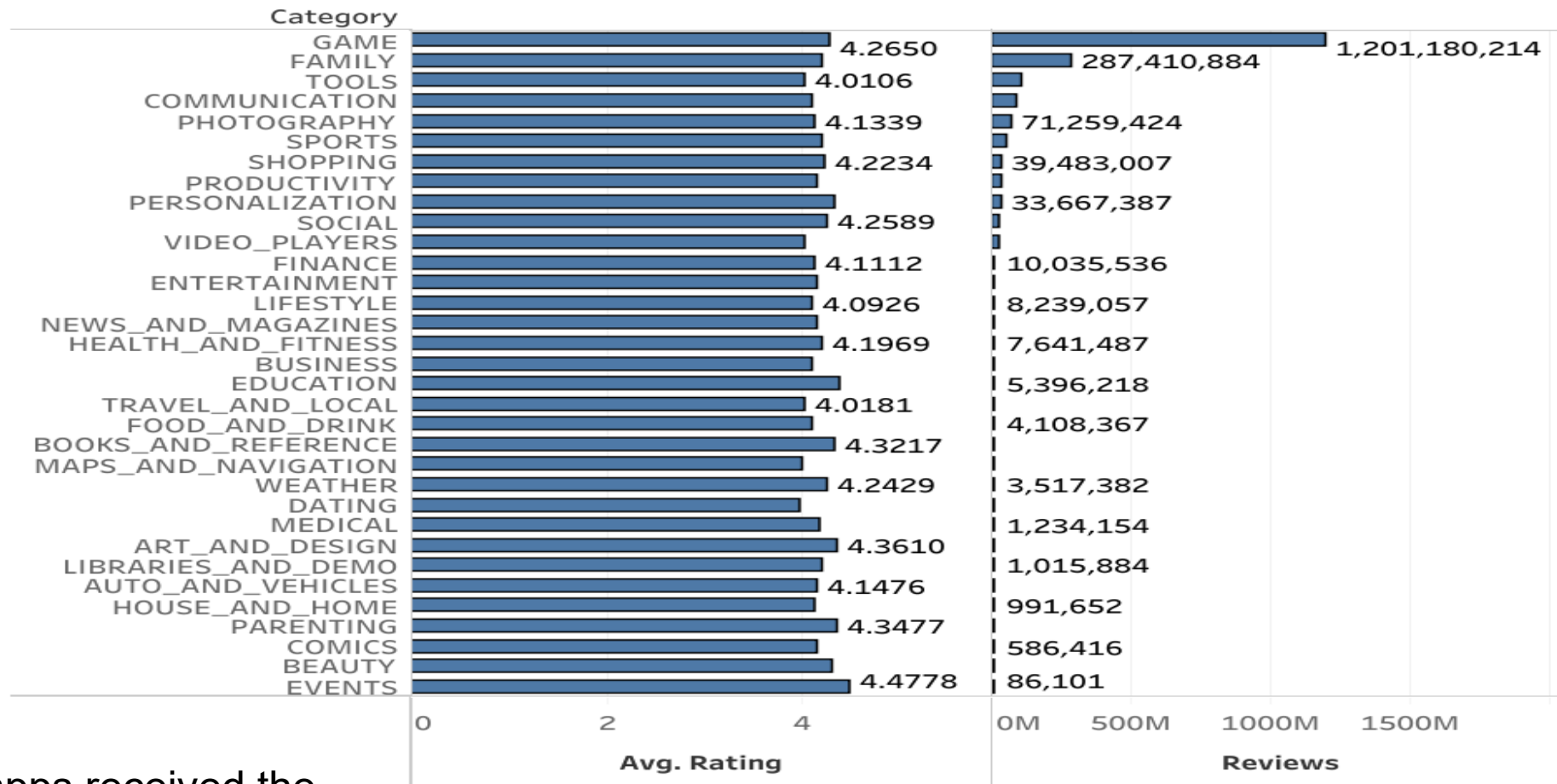


About 93% of apps are paid for.



4. Which category have the highest rating and reviews?

Average Rating and Reviews

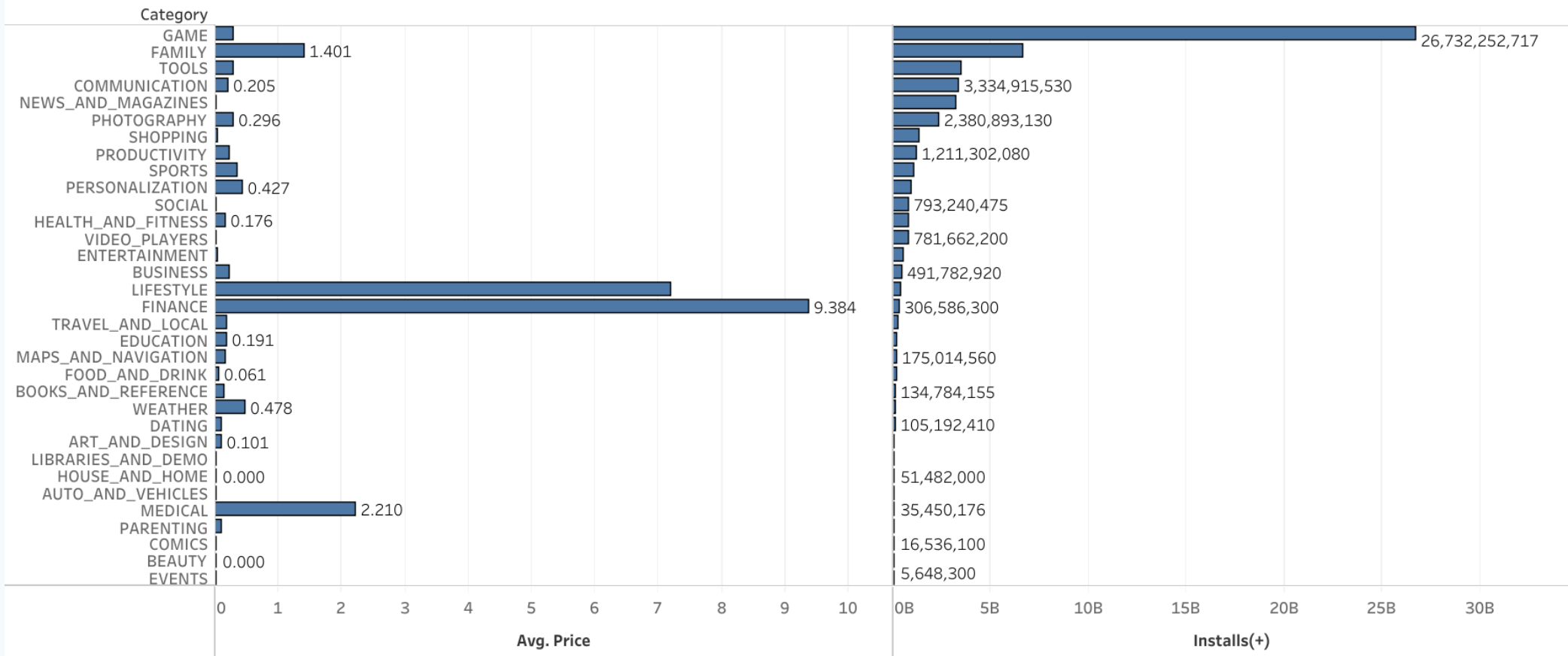


Game apps received the highest number of reviews.



5. How Does Price And Installs Vary Across Different Category?

Average Price and Installs





Summary of findings:

- **Top Apps based on Category:**

- Almost 22% of Apps are in the Family category and the Events category recorded about 0.5% which is the lowest number of Apps.

- **Top Apps Installs :**

- The Game category recorded the highest number of installs(47.7%), followed by Family, which recorded 11.92%. The two categories also recorded the highest reviews of 58.57% and 14.01% respectively.

- **Price Vs Installs:**

- There is an inverse relationship between the average price of apps in each category and the installs. Games which have a low average price of 0.288 recorded the highest installs while Finance with the highest average price of 9.384 recorded very low installs.



Recommended actions:

Product recommendations:

- App developers should focus on creating economically priced apps in the Games and Family categories.

Marketing recommendations:

- The Google store App data tells us that Games and Family apps are more popular. Therefore App developers should advertise more of those products.



Thank you!