The Android App Market on Google Play store data analytics

Power bi link:

Dataset link :

❖ Methodology

1. Data Collection

2. Importing Data to Power BI

3. Data Cleaning with Power Queries

4. DAX Queries for Calculated Measures

5. Data Visualization

6. Conclusion

7. Report and Presentation

❖ Data introduction

Table 1 :

	App	Category	Rating	Reviews	Size	Installs	Type	Content Rating
1	NBA	SPORTS	4.4	108318	35	10,000,000+	Free	Everyone
2	NHL	SPORTS	4	68935	48	5,000,000+	Free	Everyone
3	NASCAR MOBILE	SPORTS	4.2	80900	21	1,000,000+	Free	Everyone
4	Univision Deportes: Liga MX, MLS, FÃºtbol Live	SPORTS	4.2	75545		5,000,000+	Free	Everyone
5	Real Basketball	SPORTS	4.5	1605267		10,000,000+	Free	Everyone
6	Expedia Hotels, Flights & Car Rental Travel Deals	RAVEL_AND_LOCA	4.1	136626	14	10,000,000+	Free	Everyone
7	trivago: Hotels & Travel	RAVEL_AND_LOCA	4.2	219848		50,000,000+	Free	Everyone
8	Hopper - Watch & Book Flights	RAVEL_AND_LOCA	4.4	52029		5,000,000+	Free	Everyone
9	TripIt: Travel Organizer	RAVEL_AND_LOCA	4.4	49190	25	1,000,000+	Free	Everyone
10	Trip by Skyscanner - City & Travel Guide	RAVEL_AND_LOCA	4.1	5150		500,000+	Free	Everyone
11	CityMaps2Go Plan Trips Travel Guide Offline Maps	RAVEL_AND_LOCA	4.3	64713	58	1,000,000+	Free	Everyone

- This dataset features a collection of apps from the "Art & Design" category.
- It includes basic metadata such as the app's **name**, its overall **category**, and specific attributes like **user ratings** and **review counts** which reflect user engagement.
- Data points cover the app's file size, total downloads indicating its popularity, and its pricing model—whether it's **free** or **paid**.
- Each app is classified by the appropriate **content rating** and **genre**, offering insights into its target demographic and functionality.

Table 2:

App	Sentiment
10 Best Foods for You	Positive
10 Best Foods for You	Positive
10 Best Foods for You	Neutral
10 Best Foods for You	Positive
10 Best Foods for You	Positive
10 Best Foods for You	Positive
10 Best Foods for You	Positive
10 Best Foods for You	Negative
10 Best Foods for You	Neutral

- This table presents **user sentiment** analysis for app reviews.

- It provides insights into how users feel about the apps, categorizing their feedback into three main sentiments: **Positive**, **Negative**, or **Neutral**.

- The "Sentiment" column highlights whether the overall user response to an app is favorable, unfavorable, or indifferent, offering a quick overview of user satisfaction and engagement.

- The overall dataset contains information on **9,631 applications** across **33 different categories** from the Google Play Store.

- These apps have accumulated a total of **77.5 billion downloads** and received **2 billion user reviews**.

- This comprehensive data offers valuable insights into app performance, user engagement, and category-specific trends, providing a solid foundation for analyzing what drives app popularity and success.

❖ Purpose

- The purpose of this analysis is to explore trends and patterns in Google Play Store apps.

- By examining factors like user ratings, number of reviews, app size, and downloads, we aim to identify what contributes to an app's popularity and success.

- This analysis will help developers and businesses make data-driven decisions for app development and marketing strategies.
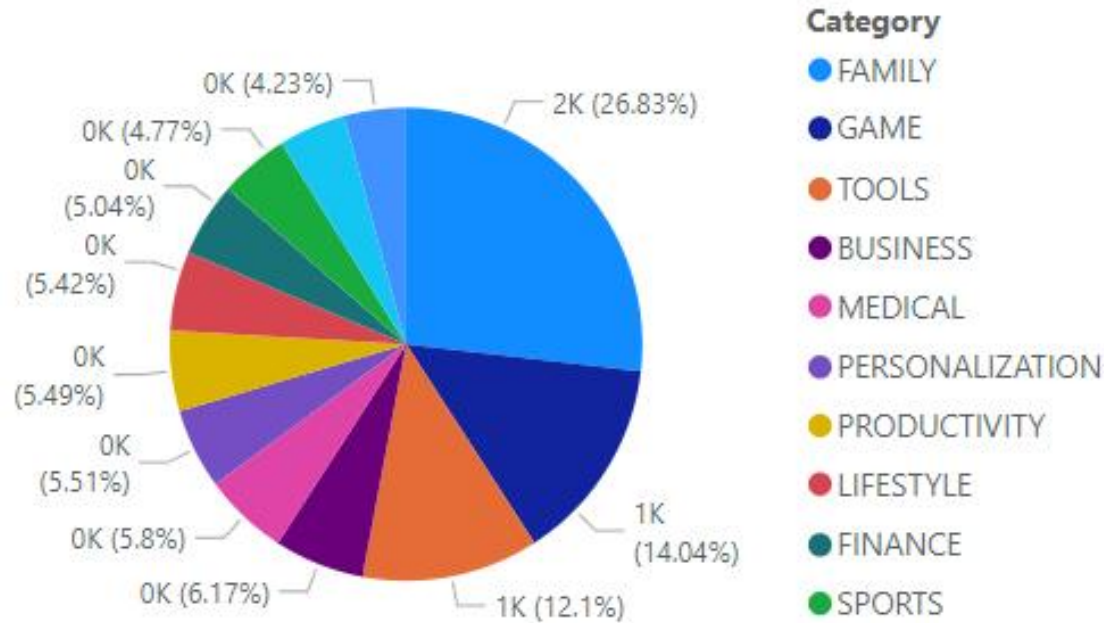
1. Free vs Paid applications
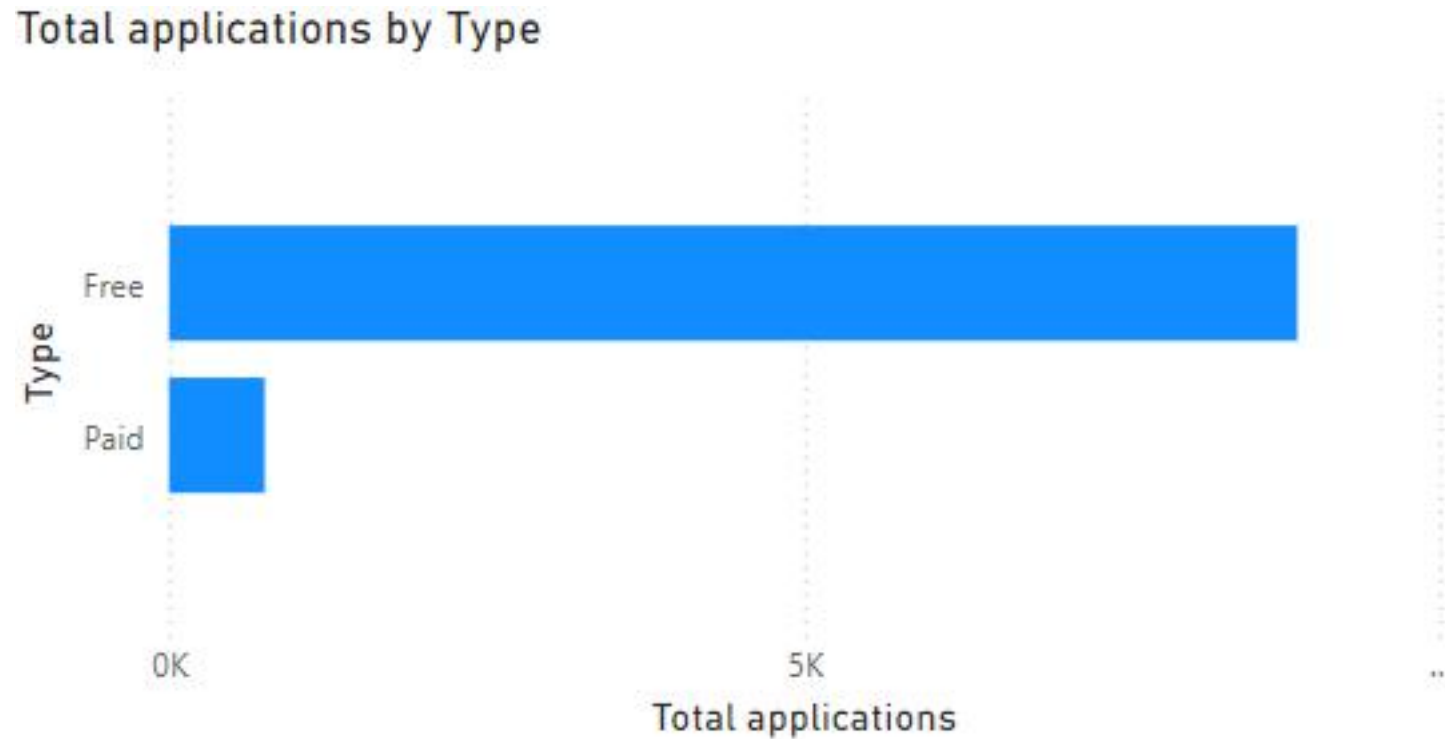
Out of **9631** applications **8882** applications are F**ree**, and **753** applications are **Paid**.

2. Category wise number of applications

Proportion of categories

- This **pie chart** visualizes the number of applications occupied by the different categories.
- The majority number of apps belongs to **Family** category (2k applications) **26.83%**, along with that **Gaming** category stands for 2nd highest category with apps (956 applications) **14.04%**. **Tools** category has **824** applications which holds **12%** of the total number of apps.
- On the other hand **Sports**, **Communication**, **Health and fitness** are the categories with **least** number of apps which have less than **300** apps i.e. below **5%**.

3. Average ratings of categories

- The line chart represents the average rating of the categories.
- As the chart suggests, the applications having **Medical** category has the **highest** average rating with **4.70**
- Along with that **Finance (4.50)**, **Sports (4.45)**, and **Family (4.40)** having the maximum average rating.
- **Gaming** category has **4.17** average rating.
- While the **Health and fitness** and **Lifestyle** stores the least average rating with **3.60** and **4.0** respectively.

4. Number of reviews by category
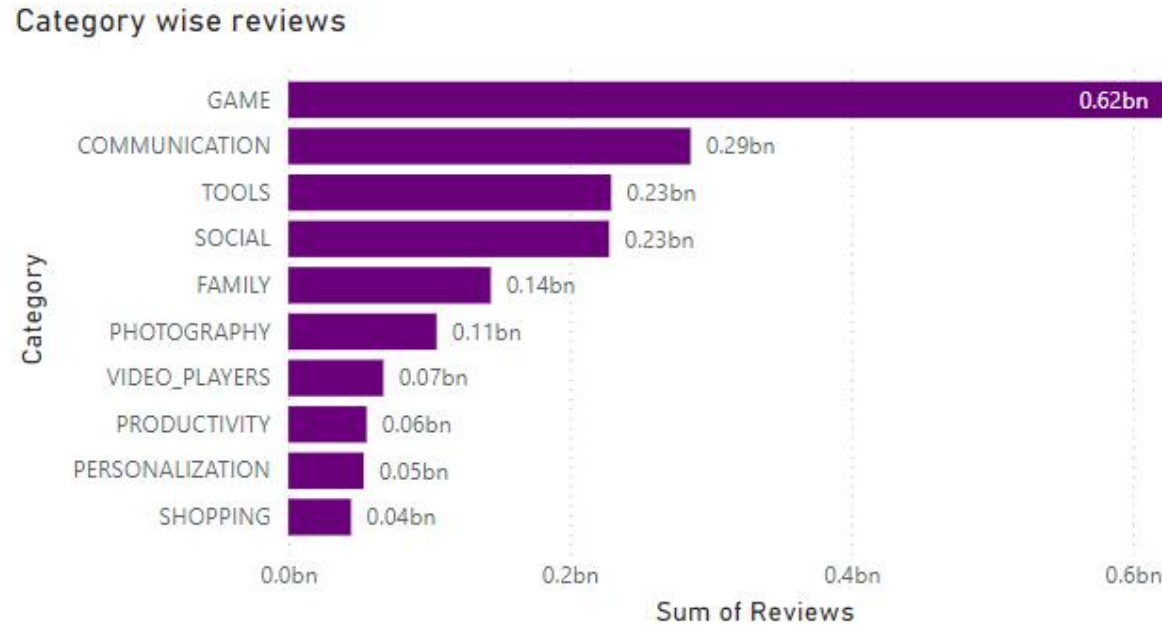
- Looking at charts, it clearly concludes that **Gaming** category apps have **highest** number of reviews **0.62 billion**.
- After gaming the **Communication**, **Tools** and **Social** category apps are having highest count of reviews with **0.29**, **0.23** and **0.23 billion** respectively.

# 5. Number of applications by Age group

Total applications by Age group

0K (4.07%)
1K (10.75%)
8K (85.13%)

Age group
- Everyone
- Teen
- Mature 17
- Adults only
- Unrated
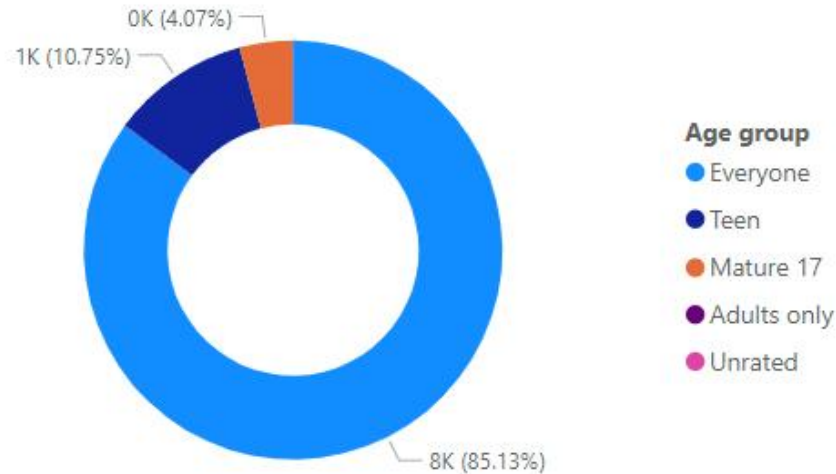
- This **donut charts** informs, the majority of applications, approximately **86%**, are designed for the **"Everyone"** age group, accounting for **8,202** out of **9,631 apps**.

- The **"Teen"** age group makes up **10.75%** of apps, with **1,036** applications.

- The **"Mature"** age group has **392** apps, while **"Adults Only"** applications represent a **negligible** portion of the total, with very few apps available.

# 6. Average ratings of applications with age group
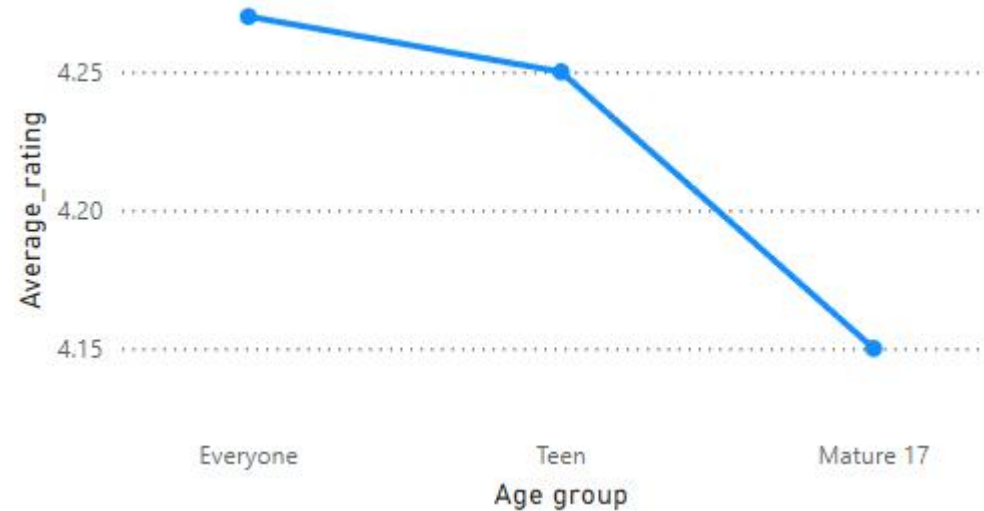
- Applications which are for group age **Everyone** has the highest average rating of 4.27
- The age group Teen has the 2nd highest average rating of 4.25
- The age group which has the least average rating is Mature. Mature age group has 4.17 average rating.

7. Number of installs by Category

Sum of Installs by Category
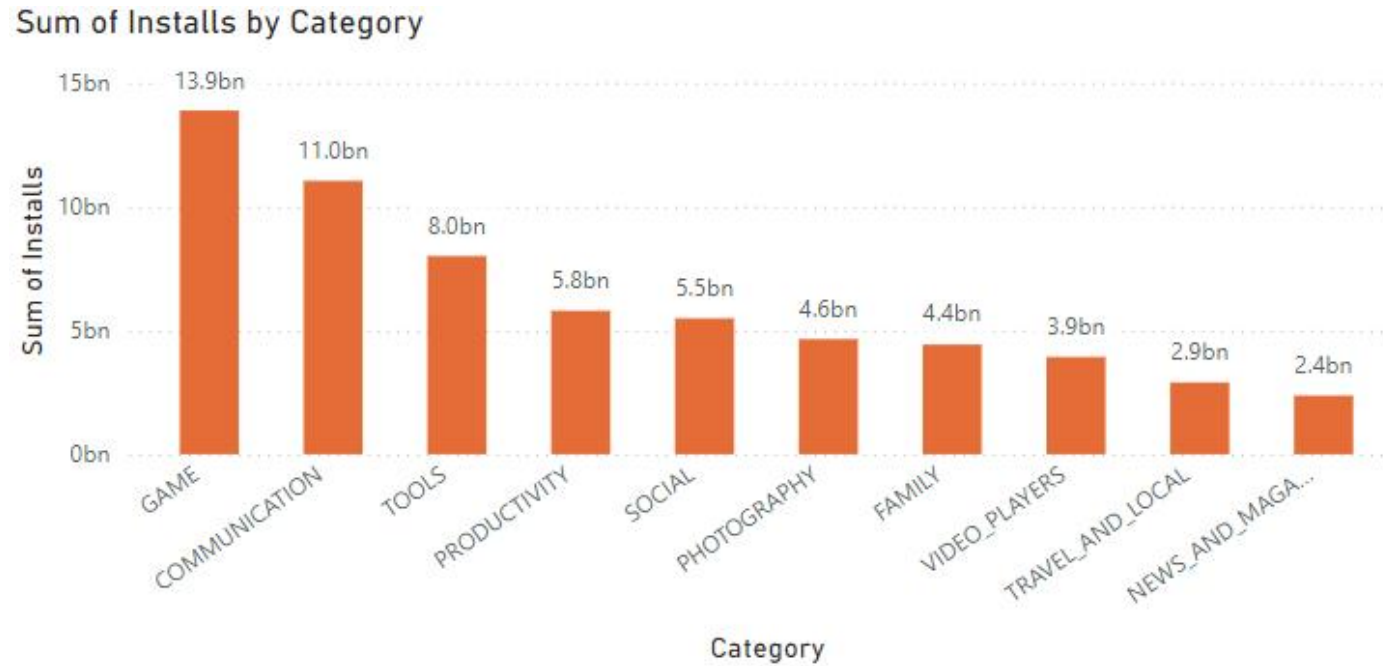
- The bar chart shows the number of installs across different app categories.
- **Gaming** leads with **13.9 billion installs**, followed by **Communication** at **11 billion**. **Tools** and **Productivity** have **8 billion** and **5.8 billion** installs, respectively, highlighting a demand for efficiency.
- **Social** apps attract **5.5 billion** installs, while **Photography** apps have **4.6 billion**.
- Lastly, **News and Magazines** reach **2.4 billion installs**. This data provides clear insights into user preferences across app categories.

8. Average size of application by category

Average size by Category
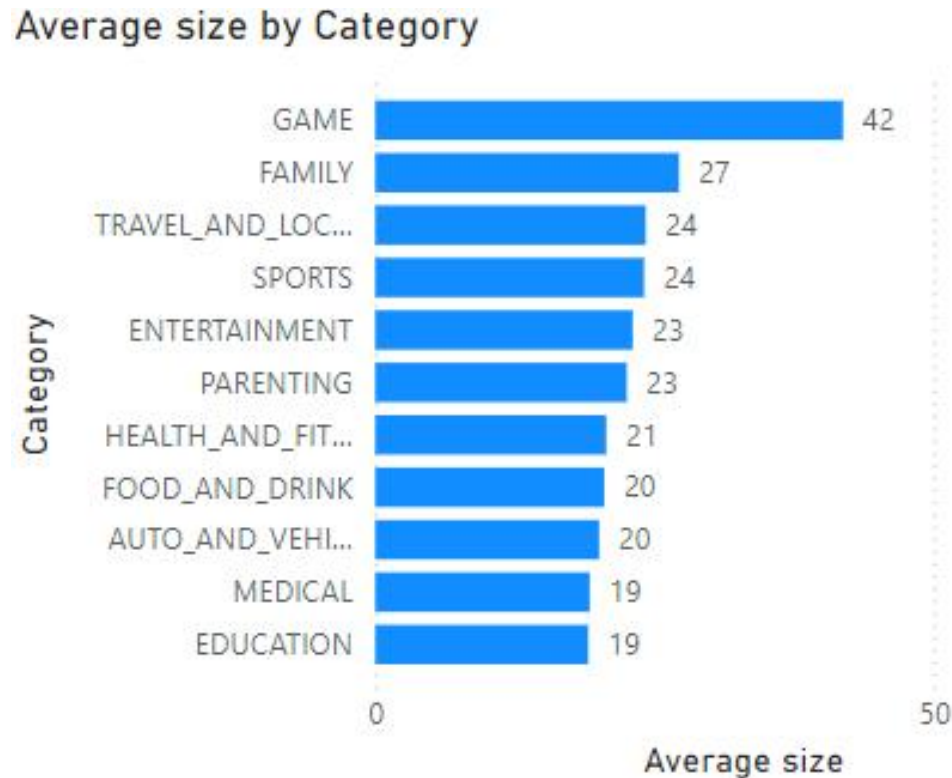
- The bar chart shows the average size of apps in each category.
- Game apps are the largest, with an average size of 42 MB, making them significantly bigger than other categories.
- Family apps follow, with an average size of 27 MB. Travel and Local apps, along with Sports apps, both have an average size of 24 MB.
- Entertainment, Parenting, and Health and Fitness apps range between 21 and 23 MB in size.
- On the other hand, Education and Medical apps are the smallest, each averaging 19 MB.
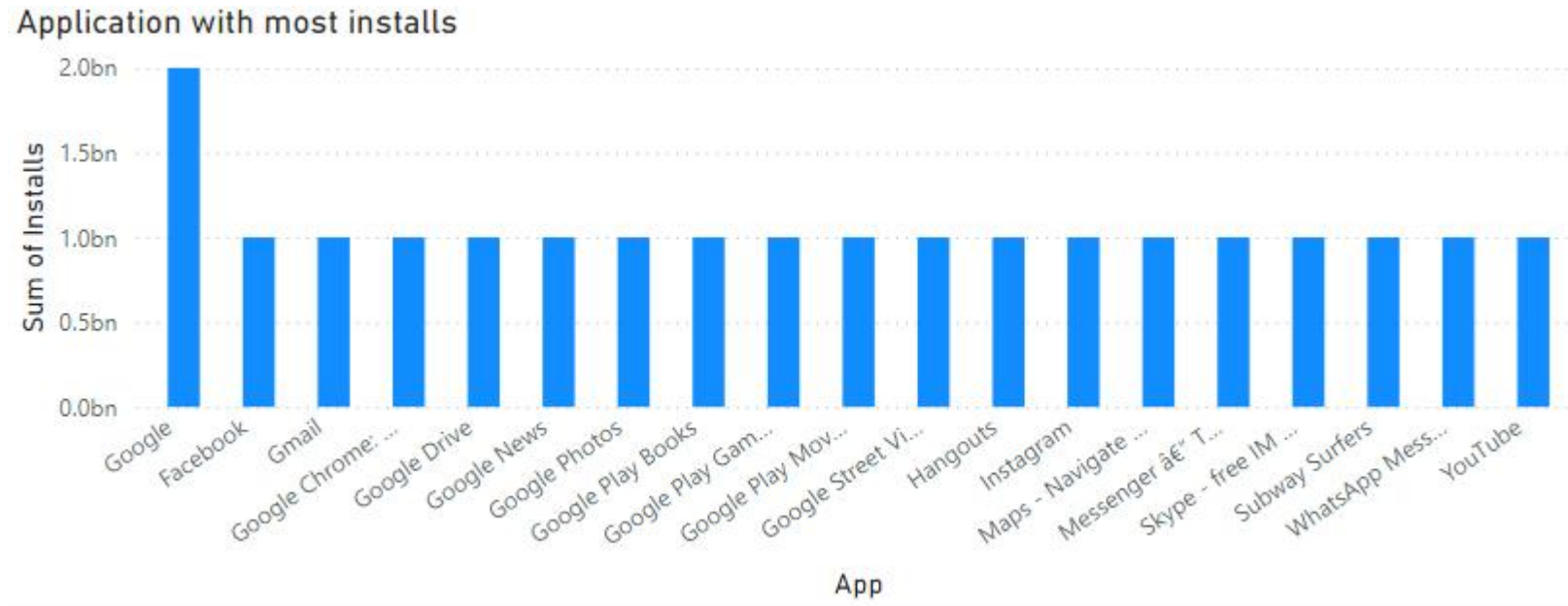
9. Top 10 best rated applications

Top 10 apps by ratings
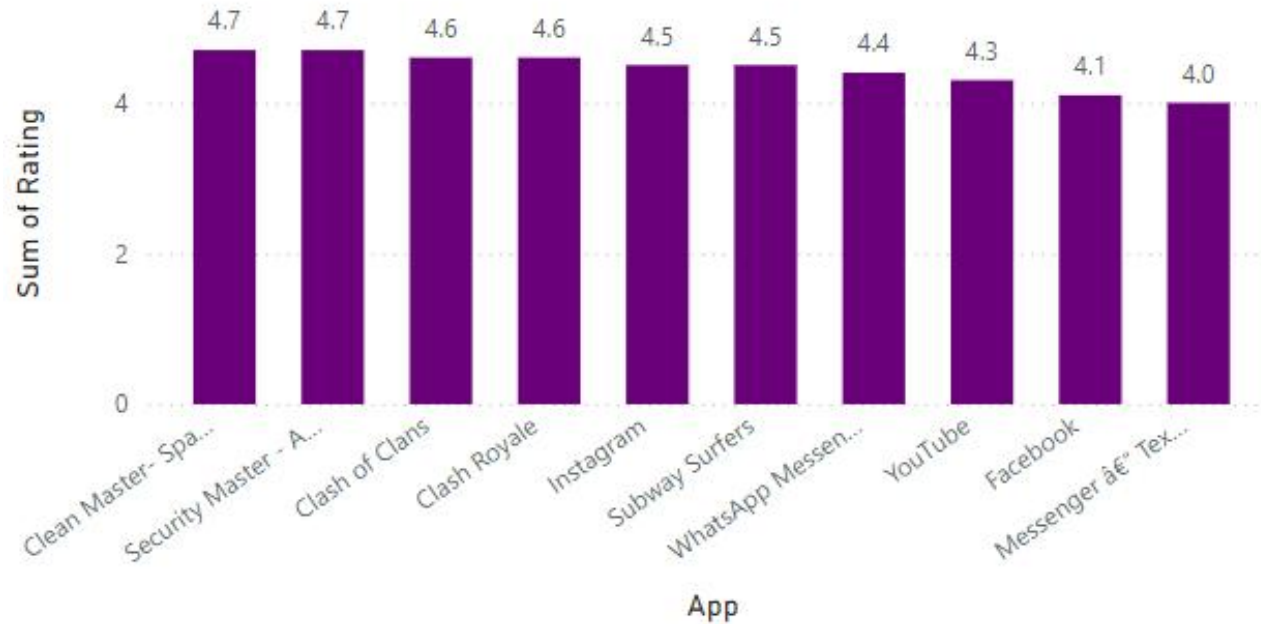
Top 10 best rated apps

1. Clean master : 4.7
2. Security master : 4.7
3. Clash of clans : 4.6
4. Clash royale : 4.6
5. Instagram : 4.5
6. Subway surfers : 4.5
7. Whatsapp : 4.4
8. YouTube : 4.3
9. Facebook : 4.1
10. Messenger : 4.0

10. Top most installed applications

Google leads the list with the massive number of installs **2 billions**. All other applications from above charts having more than **1 billion** of installs showing the list of applications with highest downloads.

❖ Conclusion

➢ The analysis shows that **Family** and **Gaming** apps **dominate** in number of applications, with **Medical** apps receiving the **highest** average rating (4.70).

➢ Most apps (**86%**) are designed for the **"Everyone"** age group, which also holds the **highest average rating**.

➢ **Gaming leads** in installs with **13.9** billion, followed by **Communication** apps.

➢ **Game** apps are the **largest** in **size**, averaging **42** MB, while **Medical** and **Education** apps are the smallest at **19** MB.

➢ **Top-rated** apps include **Clean Master** and **Security Master** with **4.7** ratings, and **Google apps** lead in **downloads** with over **2 billion installs**.