

# **Google Playstore Dataset Analysis**

Authored by:

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## **Table of Contents**

1. Introduction
2. Scope of the Analysis
3. Source of dataset
4. ETL process
5. Analysis on dataset (for each analysis)
  - i. Introduction
  - ii. General Description
  - iii. Specific Requirements, functions and formulas
  - iv. Analysis results
  - v. Visualization
6. List of Analysis with results
7. References
8. Bibliography

## INTRODUCTION

**Data Analysis** is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, while being used in different business, science, and social science domains.

The analytics team of the Google Play Store Developers or anyone who would like to host an app on Playstore anywhere in the world would love to check my through data analysis of each and every app leading to a well-organized and fruitful information. My analysis contains data on different apps category, their rating and reviews, total number of downloads, price and the app categories, which are most successful.

Google Playstore Dataset can be obtained from [here](#) on Kaggle. It was scrapped using JQuery and was published by Ms. Lavanya Gupta. It contains the following data fields: -

- APP – The name of the app.
- CATEGORY – Name of the Category to which, the app belongs, viz Family, Communications, Health, Investments, Beauty, and Games etc.
- RATING – Displays the average rating of the app on Playstore.
- REVIEWS – The count of total number of Reviews that the app has received on playstore.
- INSTALLS – The count of total number of installs.
- TYPE – Type of the App, Paid or Free.
- PRICE – The Price of the app on Playstore.
- CONTENT RATING – The content of the app is rated as per the titles like Everyone, Teens, 13+ or Adults, based on the content.
- GENRE – The genre to which the app belongs.
- LAST UPDATED – Date of the last update available for the app.

## **SCOPE OF ANALYSIS**

Any person who wants to publish an app on Playstore would like to know what kind of apps are popular on Playstore and are in high demand. They would also like to know what kind of apps and which genre and categories receive the highest revenue, which would help them know the best category that can result into a high probability of success. The Analytics team and other stakeholders, who like to publish their apps on Playstore wishes to answer the following objectives: -

1. Predicting Category-wise Rating for Each App-Category.
2. Finding the Right Price Point for a given App-Category.
3. Predicting category-wise scope for Success of an App on Play-Store.
4. Finding the Best-Niche to Target for Augmented Growth.
5. Discovering Insights from Data to predict the best-strategies that facilitate growth.

Aim of this project is to answer the above objectives in the form of visualization by creating a dashboard to convey the answers effectively and efficiently.

## ETL PROCESS

In computing, extract, transform, load (ETL) is a process in database usage to prepare data for analysis, especially in data warehousing. Data extraction involves extracting data from homogeneous or heterogeneous sources, while data transformation processes data by transforming them into a proper storage format/structure for the purposes of querying and analysis; finally, data loading describes the insertion of data into the final target database such as an operational data store, a data mart, or a data warehouse. A properly designed ETL system extracts data from the source systems, enforces data quality and consistency standards, conforms data so that separate sources can be used together, and finally delivers data in a presentation-ready format so that application developers can build applications and end users can make decisions.

Precisely, ETL is defined as a process that extracts the data from different RDBMS source systems, then transforms the data (like applying calculations, concatenations, etc.) and finally loads the data into the Data Warehouse system. ETL stands for Extract, Transform and Load.

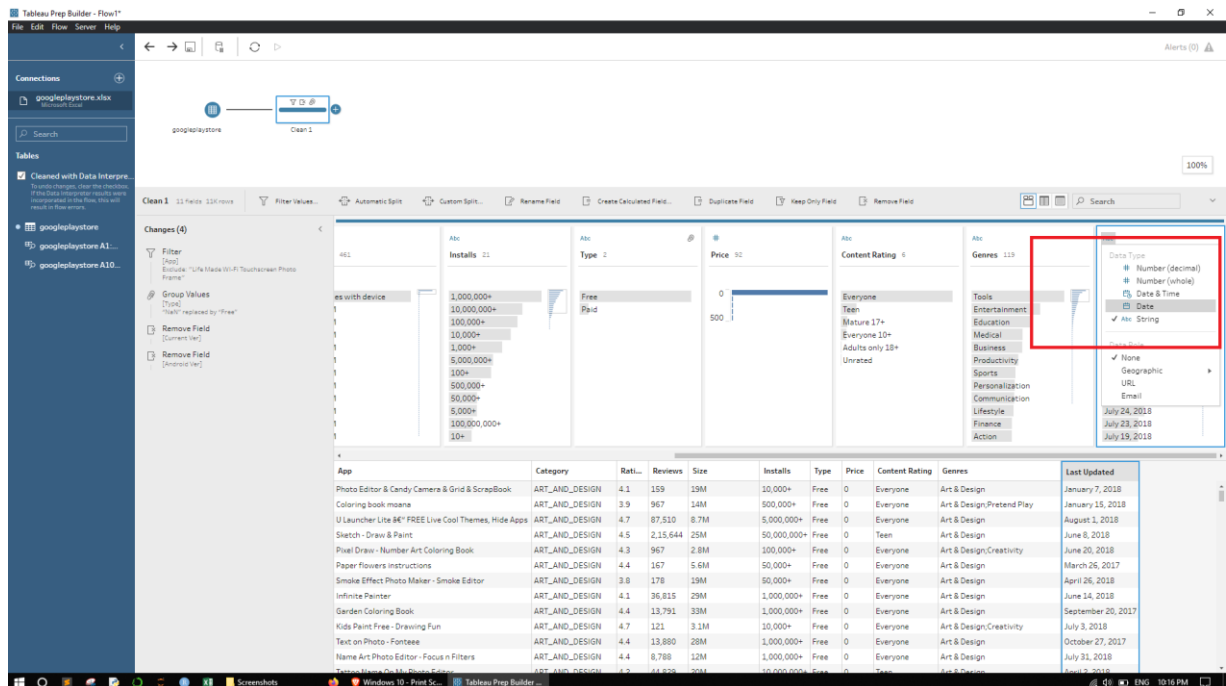
Before ETL, the dataset looked like this. **This data is taken from Kaggle.**

App	Category	Rating	Reviews	Size	Installs	Type	Price	Content R	Genres	Last Upda	Current Vi	Android Ver
Photo Editi	ART_AND	4.1	159	19M	10,000+	Free		0	Everyone	Art & Desi	January 7, 1.0.0	4.0.3 and up
Coloring b	ART_AND	3.9	967	14M	500,000+	Free		0	Everyone	Art & Desi	January 15 2.0.0	4.0.3 and up
U Launcher	ART_AND	4.7	87510	8.7M	5,000,000+	Free		0	Everyone	Art & Desi	August 1, 1.2.4	4.0.3 and up
Sketch - D	ART_AND	4.5	215644	25M	50,000,000+	Free		0	Teen	Art & Desi	June 8, 20	Varies wit 4.2 and up
Pixel Draw	ART_AND	4.3	967	2.8M	100,000+	Free		0	Everyone	Art & Desi	June 20, 2	1.1 4.4 and up
Paper flov	ART_AND	4.4	167	5.6M	50,000+	Free		0	Everyone	Art & Desi	March 26,	1 2.3 and up
Smoke Eff	ART_AND	3.8	178	19M	50,000+	Free		0	Everyone	Art & Desi	April 26, 2	1.1 4.0.3 and up
Infinite P	ART_AND	4.1	36815	29M	1,000,000+	Free		0	Everyone	Art & Desi	June 14, 2	6.1.61.1 4.2 and up
Garden Cc	ART_AND	4.4	13791	33M	1,000,000+	Free		0	Everyone	Art & Desi	Septembe 2.9.2	3.0 and up
Kids Paint	ART_AND	4.7	121	3.1M	10,000+	Free		0	Everyone	Art & Desi	July 3, 201	2.8 4.0.3 and up
Text on Pf	ART_AND	4.4	13880	28M	1,000,000+	Free		0	Everyone	Art & Desi	October 2 1.0.4	4.1 and up
Name Art	ART_AND	4.4	8788	12M	1,000,000+	Free		0	Everyone	Art & Desi	July 31, 20 1.0.15	4.0 and up
Tattoo Na	ART_AND	4.2	44829	20M	10,000,000+	Free		0	Teen	Art & Desi	April 2, 20	3.8 4.1 and up
Mandala C	ART_AND	4.6	4326	21M	100,000+	Free		0	Everyone	Art & Desi	June 26, 2	1.0.4 4.4 and up
3D Color F	ART_AND	4.4	1518	37M	100,000+	Free		0	Everyone	Art & Desi	August 3, 1.2.3	2.3 and up
Learn To C	ART_AND	3.2	55	2.7M	5,000+	Free		0	Everyone	Art & Desi	June 6, 20	NaN 4.2 and up
Photo Des	ART_AND	4.7	3632	5.5M	500,000+	Free		0	Everyone	Art & Desi	July 31, 20	3.1 4.1 and up
350 Diy Rc	ART_AND	4.5	27	17M	10,000+	Free		0	Everyone	Art & Desi	November	1 2.3 and up
FlipaClip -	ART_AND	4.3	194216	39M	5,000,000+	Free		0	Everyone	Art & Desi	August 3, 2.2.5	4.0.3 and up
ibis Paint	ART_AND	4.6	224399	31M	10,000,000+	Free		0	Everyone	Art & Desi	July 30, 20 5.5.4	4.1 and up
Logo Mak	ART_AND	4	450	14M	100,000+	Free		0	Everyone	Art & Desi	April 20, 2	4 4.1 and up
Boys Phot	ART_AND	4.1	654	12M	100,000+	Free		0	Everyone	Art & Desi	March 20,	1.1 4.0.3 and up
Superherc	ART_AND	4.7	7699	4.2M	500,000+	Free		0	Everyone	Art & Desi	July 12, 20 2.2.6.2	4.0.3 and up
Mcqueen	ART_AND	NaN	61	7.0M	100,000+	Free		0	Everyone	Art & Desi	March 7, 2	1.0.0 4.1 and up
HD Micke	ART_AND	4.7	118	23M	50,000+	Free		0	Everyone	Art & Desi	July 7, 201 1.1.3	4.1 and up
Harley Qu	ART_AND	4.8	192	6.0M	10,000+	Free		0	Everyone	Art & Desi	April 25, 2	1.5 3.0 and up
Colorfit -	ART_AND	4.7	20260	25M	500,000+	Free		0	Everyone	Art & Desi	October 1 1.0.8	4.0.3 and up
Animated	ART_AND	4.1	203	6.1M	100,000+	Free		0	Everyone	Art & Desi	March 21,	1.03 4.0.3 and up
Pencil Sk	ART_AND	3.9	136	4.6M	10,000+	Free		0	Everyone	Art & Desi	July 12, 20	6 2.3 and up
Easy Reali	ART_AND	4.1	223	4.2M	100,000+	Free		0	Everyone	Art & Desi	August 22	1 2.3 and up
Pink Silve	ART_AND	4.2	1120	9.2M	100,000+	Free		0	Everyone	Art & Desi	July 12, 20 6.7.12.201	4.0.3 and up
Art Drawi	ART_AND	4.1	227	5.2M	50,000+	Free		0	Everyone	Art & Desi	May 31, 20	1.2 2.3 and up
Anime Ma	ART_AND	4.5	5035	11M	100,000+	Free		0	Everyone	Art & Desi	July 19, 20	2.2 4.0 and up
Easy Orig	ART_AND	4.2	1015	11M	100,000+	Free		0	Everyone	Art & Desi	January 6, 1.1.0	4.1 and up
I Creative	ART_AND	4.7	353	4.2M	10,000+	Free		0	Teen	Art & Desi	April 27, 2	1.6 4.1 and up
How to dr	ART_AND	3.8	564	9.2M	100,000+	Free		0	Everyone	Art & Desi	July 11, 20	2.1 4.1 and up
UNICORN	ART_AND	4.7	8145	24M	500,000+	Free		0	Everyone	Art & Desi	August 2, 1.0.9	4.4 and up
Floor Plan	ART_AND	4.1	36639	Varies wit	5,000,000+	Free		0	Everyone	Art & Desi	July 14, 20	Varies wit 2.3.3 and up
PIP Came	ART_AND	4.7	158	11M	10,000+	Free		0	Everyone	Art & Desi	November	1.3 4.0.3 and up
How To C	ART_AND	4	591	9.4M	500,000+	Free		0	Everyone	Art & Desi	March 31,	1 4.0 and up
Drawing C	ART_AND	4.2	117	15M	10,000+	Free		0	Everyone	Art & Desi	July 20, 20 2.0.1	4.0.3 and up
Red Paper	ART_AND	4.5	176	10M	100,000+	Free		0	Everyone	Art & Desi	April 3, 20	1.4 4.0.3 and up

Through the process of ETL, we are going to clean the dataset and bring all the entities to their proper data format.

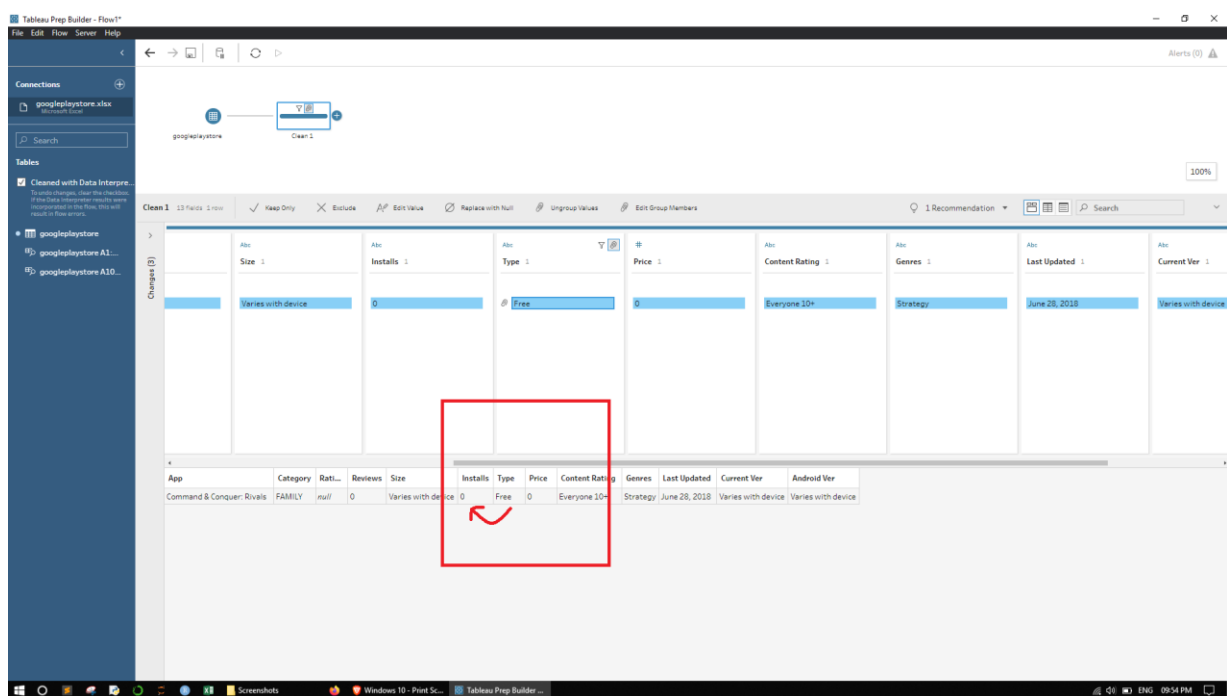
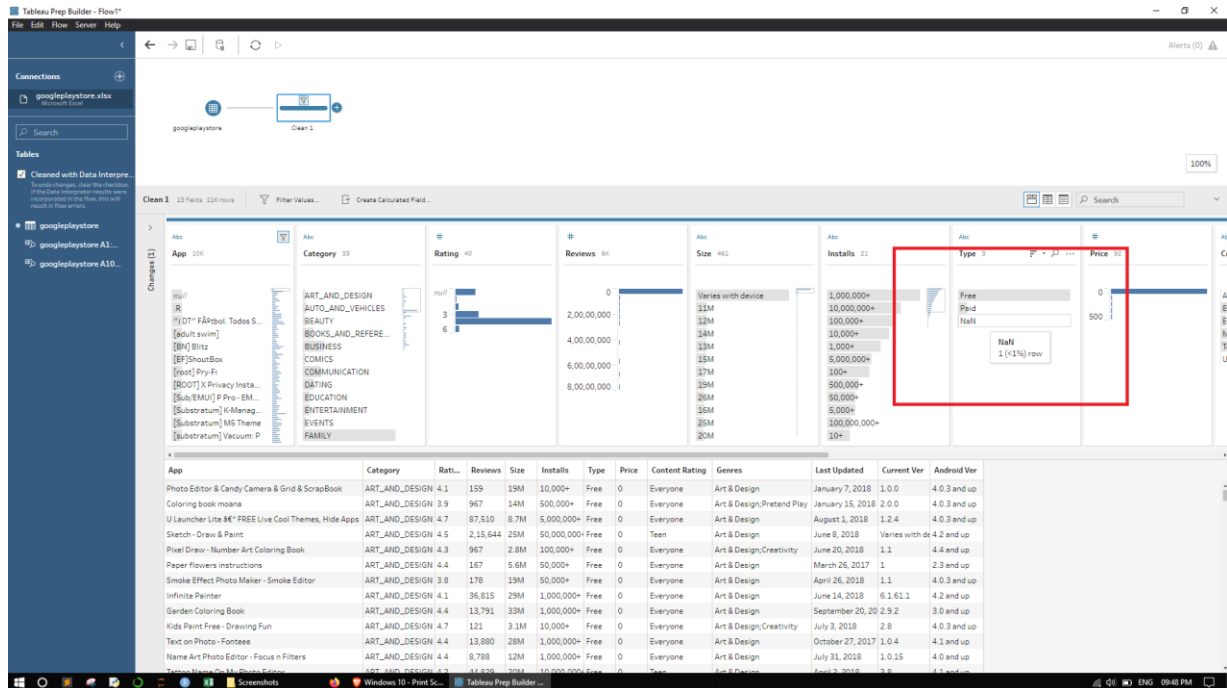
## Step 1: Changing the Datatype of the Last\_Updated Column from String to Date Type.

For this, the Alphabets icon on the top-left was clicked, and from the drop-down list, the date Tab was chosen.



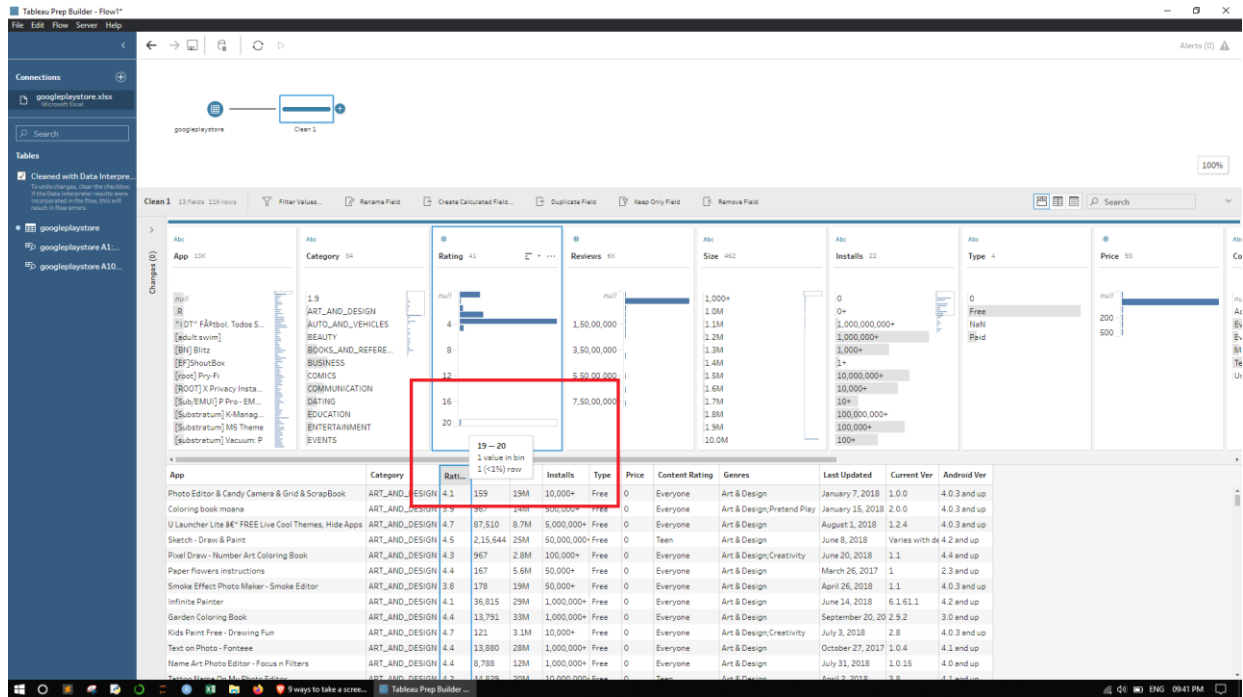
## Step 2: Replacing the Null Value in the Type-Column.

For this, the NaN value was replaced with “Free”, since the corresponding price column mentioned the price of the app as zero. This was done by directly editing the content of the cell.



### Step 3: Removing an outlier from the Ratings column.

The dataset had an entry with rating = 19. Now since rating can have values only from 0 to 5, this was clearly an outlier and a wrong value. The other entries of this row could not be trusted upon, so this particular entry was removed.



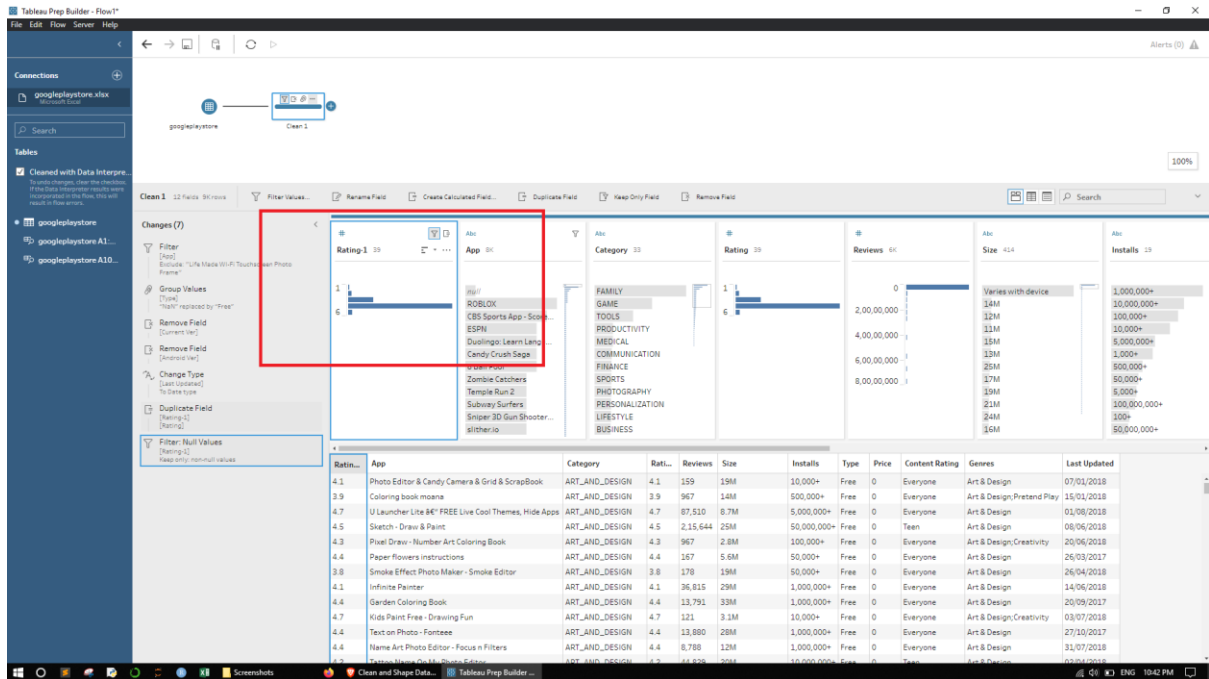
#### Step 4: Excluding the NULL values from the data.

There are a lot of null values in the data, and it's not possible to remove all the entries of null value as they are more than 10% of the total data entries. Instead, the null values were replaced by a central value of the column. This was done by using a FIXED LOD formula:

```
IF ISNULL ( [RATING] ) THEN { FIXED [CATEGORY] : MEDIAN ( [RATING] ) }
ELSE [RATING] END
```

It was chosen to use Median instead of Mean or Mode, because the data was right-skewed, as evident from the graph in the below picture:

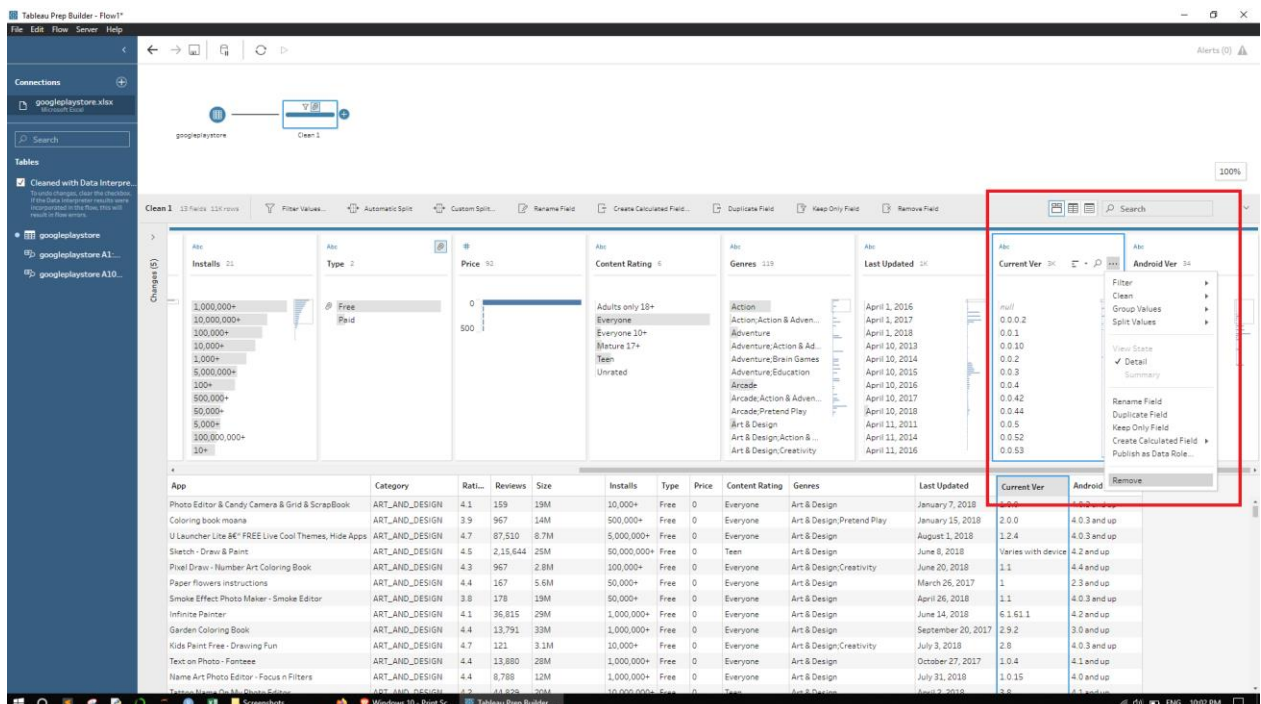




Thus, the null values were replaced with the median value of the column.

## Step 5: Dropping Unwanted rows from the Dataset

Some of the columns in the dataset are of no use for the analysis purpose like, Current\_Version, Android\_Version and App\_Size. These were dropped from the dataset.



## Step 6: Creating a Calculated field in excel

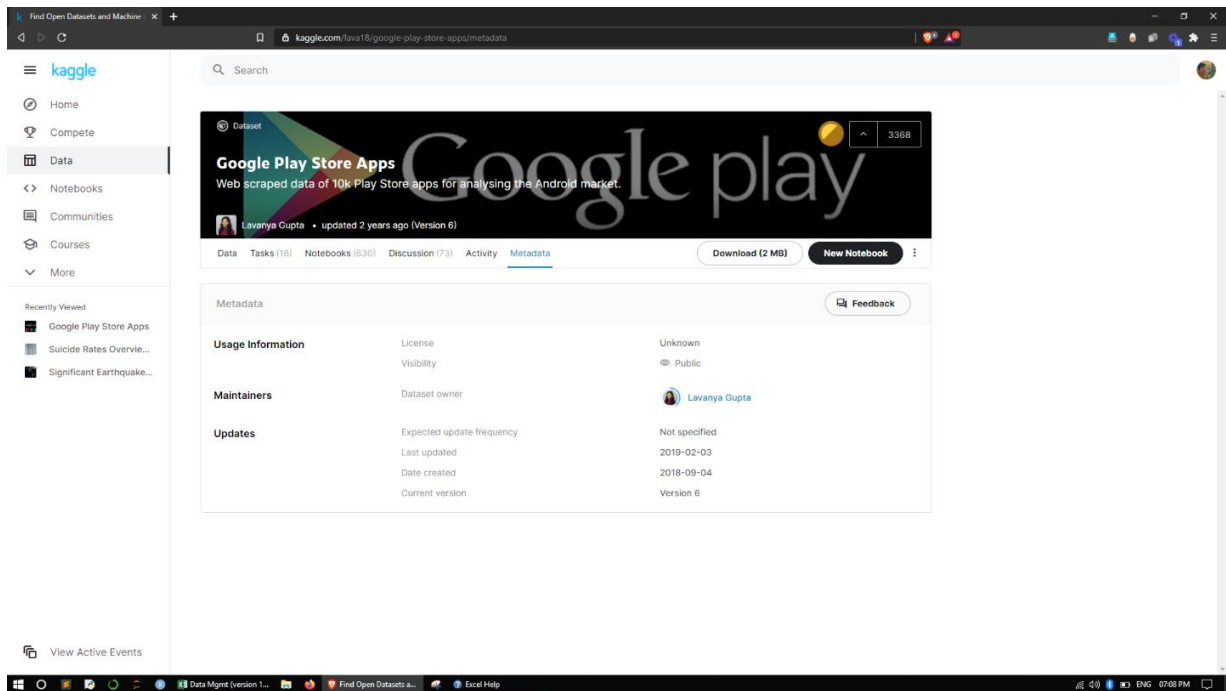
This was done after the cleaning process was already done in the tableau prep. From the Last Update column, a new column was created, Days\_Since\_Last\_Update which was done by using a DATEDIF Formula:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	App	Category	Rating	Reviews	Installs	Type	Pric	Content Rating	Genres	Last Updated	Days Since Last Updated	Min Install			
1	Command & Conquer: Rivals	FAMILY	4.3	0	0 Free	0	Everyone 10+	Strategy		28-08-2018	(J2, DATE(2015, 2, 3), "D")	0			
2	PopSicle Launcher for Android P 9.0 launcher	PERSONALIZATION	4.3	0	0 Paid	1.4\$	Everyone	Personalization		11-07-2018		207	0		
3	AK Parti YarAdm Toplaml	SOCIAL	4.3	0	0 Paid	13.9\$	Teen	Social		28-07-2017		553	0		
4	AP Series Solution Pro	FAMILY	4.3	0	0 Paid	1.0\$	Everyone	Education		30-07-2017		553	0		
5	Ain Arabic kids Ahi Ba ta	FAMILY	4.3	0	0 Paid	2.99	Everyone	Education		15-04-2016		1024	0		
6	cronometra-br	PRODUCTIVITY	4.3	0	0 Paid	154.9\$	Everyone	Productivity		24-11-2017		436	0		
7	Pekalongan CJ	SOCIAL	4.3	0	0 Free	0	Teen	Social		21-07-2018		197	0		
8	CX Network	BUSINESS	4.3	0	0 Free	0	Everyone	Business		06-08-2018		181	0		
9	Sveदन Newspapers	NEWS AND MAGAZINES	4.3	0	0 Free	0	Everyone	News & Magazines		07-07-2018		211	0		
10	Tell Application DE B2	ART_AND_DESIGN	4.3	0	0 Free	0	Everyone	Art & Design		14-03-2017		693	0		
11	EG   Explore Folegandros	TRAVEL_AND_LOCAL	4.3	0	0 Paid	3.99	Everyone	Travel & Local		22-01-2017		742	0		
12	EP Cook Book	MEDICAL	4.3	0	0 Paid	200	Everyone	Medical		26-07-2015		1288	0		
13	Eu Sou Rico	FINANCE	4.3	0	0 Paid	30.99	Everyone	Finance		09-01-2018		390	0		
14	Eu Sou Rico	FINANCE	4.3	0	0 Paid	384.9\$	Everyone	Finance		11-07-2018		207	0		
15	Im RiN'Au sou Rico(የኢትዮጵያ ምርጫውን ይመልከቱ)	LIFESTYLE	4.3	0	0 Paid	399.9\$	Everyone	Lifestyle		01-12-2017		429	0		
16	Healthy Relationships Guide	DATING	4.3	0	1 Free	0	Everyone	Dating		11-07-2018		187	1		
17	PluSicne	DATING	4.3	0	1 Free	0	Mature 17+	Dating		17-07-2018		201	1		
18	Vissumad	MEDICAL	4.3	0	1 Paid	2.99	Everyone	Medical		01-08-2018		186	1		
19	Be the Expert in Phlebotomy - Professional Nursing	MEDICAL	4.3	0	1 Paid	0.99	Everyone	Medical		24-07-2018		134	1		
20	WBA Z Health Guide	MEDICAL	4.3	0	1 Free	0	Everyone	Medical		01-08-2018		186	1		
21	WAH 247	MEDICAL	4.3	0	1 Free	0	Everyone	Medical		26-07-2018		198	1		
22	MyWoundDoctor - Provider	MEDICAL	4.3	0	1 Free	0	Everyone	Medical		27-07-2018		191	1		
23	DHH Reaction Wall	GAME	4.3	0	1 Paid	0.99	Everyone	Arcade		24-07-2016		924	1		
24	Pistachio Launcher for Android P 9.0	PERSONALIZATION	4.3	0	1 Paid	1.4\$	Everyone	Personalization		11-07-2018		207	1		
25	Pureness Pacty (Android PJ) - Theme for Xperia,L	PERSONALIZATION	4.3	0	1 Paid	1.4\$	Everyone	Personalization		23-07-2018		195	1		
26	Mishra's KULIA's Travel Guide R.P.(Rajahmundry)	FAMILY	4.3	0	1 Free	0	Everyone	Education		17-07-2018		201	1		
27	Michael's AG Sound Board	FAMILY	4.3	0	1 Paid	0.99	Everyone	Entertainment		12-12-2017		418	1		
28	Kay AH Gd.	MEDICAL	4.3	0	1 Free	0	Everyone	Medical		15-02-2018		353	1		
29	Cathy AH	TOOLS	4.3	0	1 Free	0	Everyone	Tools		16-07-2018		202	1		
30	AG Math Facts	FAMILY	4.3	1	1 Paid	2.99	Everyone	Educational		17-05-2017		627	1		
31	AK Watch for WatchMaker	PERSONALIZATION	4.3	2	1 Paid	0.99	Everyone	Personalization		15-06-2017		534	1		
32	AAAY Caramall	FAMILY	4.3	0	1 Paid	1.99	Everyone	Education		13-06-2014		1696	1		
33	Ako ay may Iyob Pinoy Kid Song Offline	FAMILY	4.3	0	1 Free	0	Mature 17+	Entertainment		30-07-2018		188	1		
34	YAKALA AY	GAME	4.3	0	1 Paid	0.99	Everyone	Arcade		07-07-2018		211	1		
35	Ay Peruk	BUSINESS	4.3	0	1 Free	0	Everyone	Business		31-10-2017		460	1		
36	It's On It's	GAME	4.3	0	1 Paid	1.4\$	Everyone	Arcade		06-02-2017		725	1		
37	BA SALES	COMMUNICATION	4.3	0	1 Free	0	Everyone	Communication		31-01-2018		368	1		
38	BH - Fitness & Nutrition	HEALTH_AND_FITNESS	4.3	0	1 Free	0	Everyone	Health & Fitness		04-07-2018		214	1		

Home
Dashboard
Objective\_1
Objective\_2
Objective\_3
Objective\_4
Objective\_5
Cleaned\_Data
Original\_Data

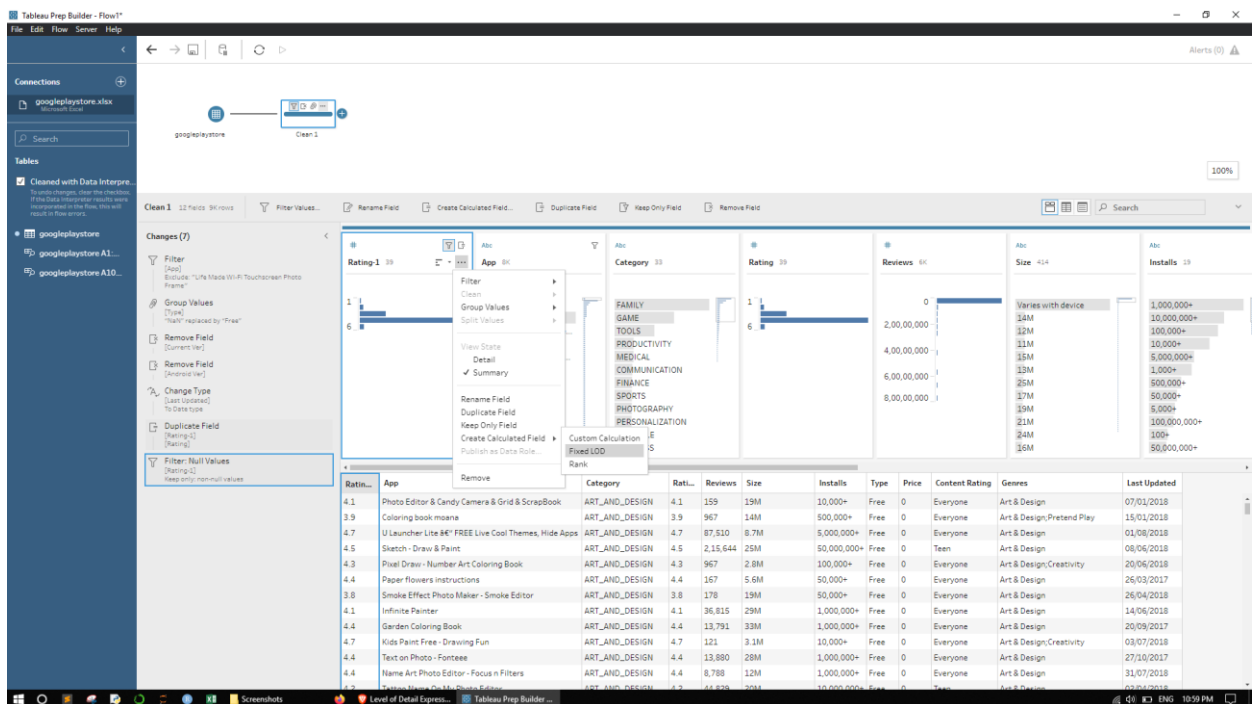
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The date chosen for the DATEDIF formula is 03-02-2019, because the dataset was last updated on this day. This was done instead of using NOW() Function to avoid the extra carry of days since February 2019.



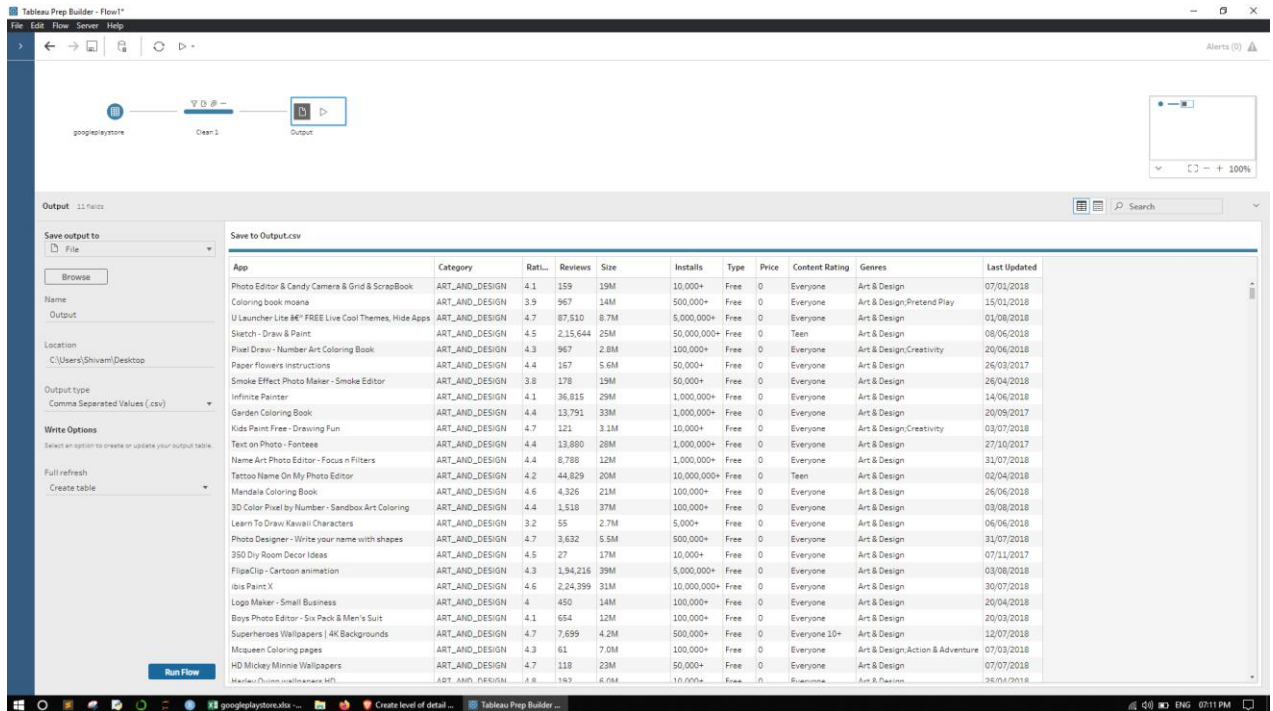
## Step 6: The Flow in Tableau Prep

The flow in the Tableau Prep Builder can be summarized as:



## Step 7: Dataset After Cleaning

After the Dataset was cleaned, It was exported to a .CSV format and converted to a table in Excel for further analysis.

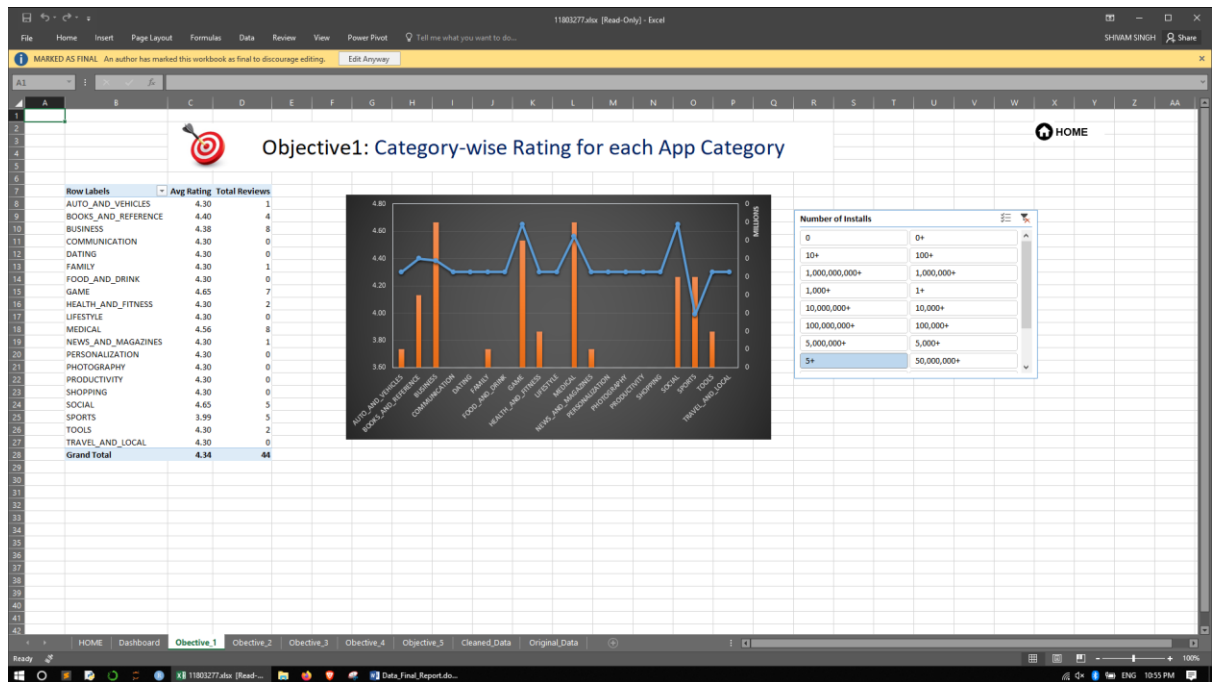


App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres	Last Updated
Photo Editor & Candy Camera & Grid & ScrapBook	ART_AND_DESIGN	4.1	159	19M	10,000+	Free	0	Everyone	Art & Design	07/01/2018
Coloring book moana	ART_AND_DESIGN	3.9	967	14M	500,000+	Free	0	Everyone	Art & Design,Pretend Play	15/01/2018
U Launcher Lite 84° FREE Live Cool Themes, Hide Apps	ART_AND_DESIGN	4.7	87,510	8.7M	5,000,000+	Free	0	Everyone	Art & Design	01/08/2018
Sketch - Draw & Paint	ART_AND_DESIGN	4.5	2,15,644	25M	50,000,000+	Free	0	Teen	Art & Design	08/06/2018
Pixel Draw - Number Art Coloring Book	ART_AND_DESIGN	4.3	967	2.8M	100,000+	Free	0	Everyone	Art & Design,Creativity	20/06/2018
Paper Flowers Instructions	ART_AND_DESIGN	4.4	167	5.6M	50,000+	Free	0	Everyone	Art & Design	26/03/2017
Smoke Effect Photo Maker - Smoke Editor	ART_AND_DESIGN	3.8	178	19M	50,000+	Free	0	Everyone	Art & Design	26/04/2018
Infinite Painter	ART_AND_DESIGN	4.1	36,815	29M	1,000,000+	Free	0	Everyone	Art & Design	14/06/2018
Garden Coloring Book	ART_AND_DESIGN	4.4	13,791	33M	1,000,000+	Free	0	Everyone	Art & Design	20/09/2017
Kids Paint Free - Drawing Fun	ART_AND_DESIGN	4.7	121	3.1M	10,000+	Free	0	Everyone	Art & Design,Creativity	03/07/2018
Text on Photo - Fontee	ART_AND_DESIGN	4.4	13,880	28M	1,000,000+	Free	0	Everyone	Art & Design	27/10/2017
Name Art Photo Editor - Focus n Filters	ART_AND_DESIGN	4.4	8,788	12M	1,000,000+	Free	0	Everyone	Art & Design	31/07/2018
Tattoo Name On My Photo Editor	ART_AND_DESIGN	4.2	44,829	20M	10,000,000+	Free	0	Teen	Art & Design	02/04/2018
Mandala Coloring Book	ART_AND_DESIGN	4.6	4,326	21M	100,000+	Free	0	Everyone	Art & Design	26/06/2018
3D Color Pixel by Number - Sandbox Art Coloring	ART_AND_DESIGN	4.4	1,518	37M	100,000+	Free	0	Everyone	Art & Design	03/08/2018
Learn To Draw Kawaii Characters	ART_AND_DESIGN	3.2	55	2.7M	5,000+	Free	0	Everyone	Art & Design	06/06/2018
Photo Designer - Write your name with shapes	ART_AND_DESIGN	4.7	3,632	5.5M	500,000+	Free	0	Everyone	Art & Design	31/07/2018
350 Dry Room Decor Ideas	ART_AND_DESIGN	4.5	27	17M	10,000+	Free	0	Everyone	Art & Design	07/11/2017
FlipaClip - Cartoon animation	ART_AND_DESIGN	4.3	1,94,216	39M	5,000,000+	Free	0	Everyone	Art & Design	03/08/2018
Ibis Paint X	ART_AND_DESIGN	4.6	2,24,399	31M	10,000,000+	Free	0	Everyone	Art & Design	30/07/2018
Logo Maker - Small Business	ART_AND_DESIGN	4	450	14M	100,000+	Free	0	Everyone	Art & Design	20/04/2018
Boys Photo Editor - Six Pack & Men's Suit	ART_AND_DESIGN	4.1	654	12M	100,000+	Free	0	Everyone	Art & Design	20/03/2018
Superheroes Wallpapers   4K Backgrounds	ART_AND_DESIGN	4.7	7,699	4.2M	500,000+	Free	0	Everyone 10+	Art & Design	12/07/2018
McQueen Coloring pages	ART_AND_DESIGN	4.3	61	7.0M	100,000+	Free	0	Everyone	Art & Design,Action & Adventure	07/03/2018
HD Mickey Minnie Wallpapers	ART_AND_DESIGN	4.7	118	23M	50,000+	Free	0	Everyone	Art & Design	07/07/2018
Masterpiece (Official Masterpiece Art)	ART_AND_DESIGN	4.8	140	4.78M	10,000+	Free	0	Everyone	Art & Design	15/04/2018

## ANALYSIS OF DATASET

### 1. Predicting Category-wise Rating for Each App-Category:

The Category-wise rating for each app category tells us the user-satisfaction with an app. The apps are rated from 0 to 5 and their avg. rating is present in the dataset, under the RATING column. We create a pivot-table with Category as Row Label and Avg. Rating as a Value column. We also keep a count of the reviews under the column header Total Reviews, to further strengthen the analysis process by counter-checking the app rating with number of reviews.

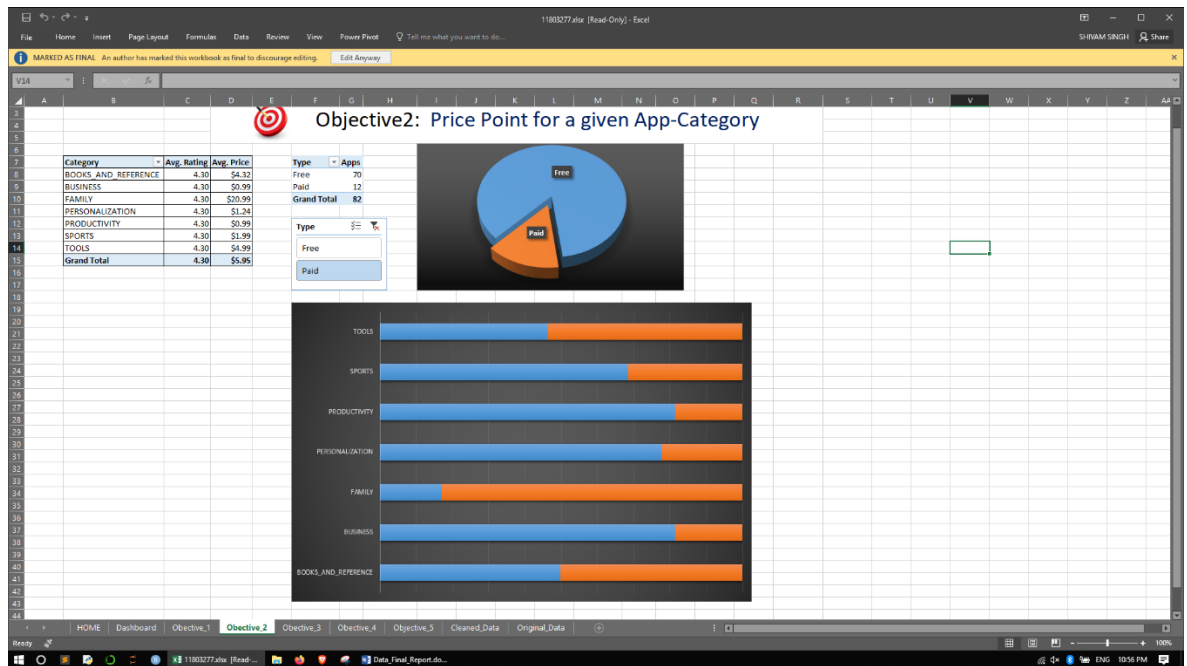


From the analysis, it is very clear that the average rating for all the categories is around 4.35. But, from the contrast of reviews received in each app category, only some of the categories are doing very good. They have a very high number of downloads as well as reviews to justify the accuracy of their ratings. Thus, from the analysis, we can be sure that categories like Family and Communication are doing exceptionally well, this is actually true because of the large number of apps in these two categories.

## 2. Finding the Right Price Point for a given App-Category:

It is a very tough decision to select an optimal price-point for an app that we want to put on Playstore. By analyzing the trend, we can decide for the right pricing-point to launch an app in any category. This can be done by using a pivot-table for categories against their respective avg. price.

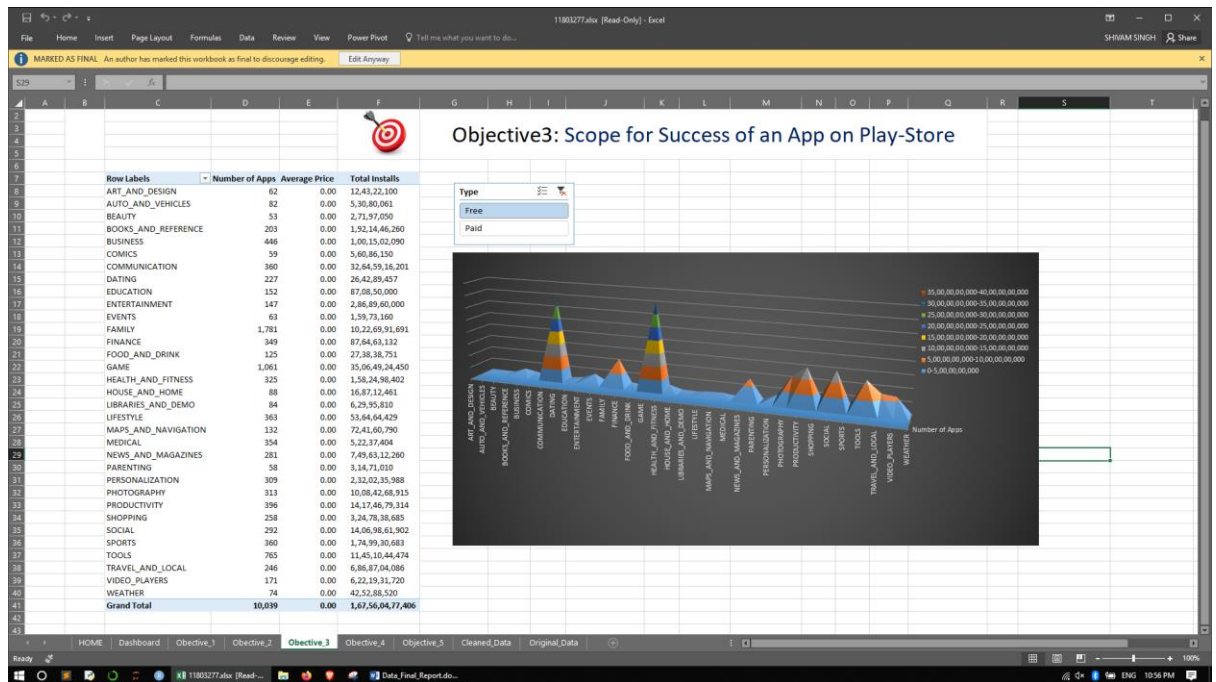
As a matter of fact, more than 82% of the apps on Playstore are free. These apps have to depend on advertisements or subscriptions or they are not-for-profit apps. This is shown using a pie-chart below:



From the analysis, it is evident that there are categories like Finance, Health and Family which although have only a small number of apps under each category but they generate higher revenue. Means, most of these apps are paid. Still, they have significant high number of downloads which show that people are still buying these products. Thus, in my opinion the best strategy is to launch an app in a category which has less number of apps and charge upfront. This will be the best idea to succeed in the long-term.

### 3. Predicting category-wise scope for Success of an App on Play-Store:

Although the apps seem to be performing very well at the first glance, but not all apps are equally successful on Playstore. This is analyzed by creating a Pivot table of Number of apps in each app category and Total installs, respectively.

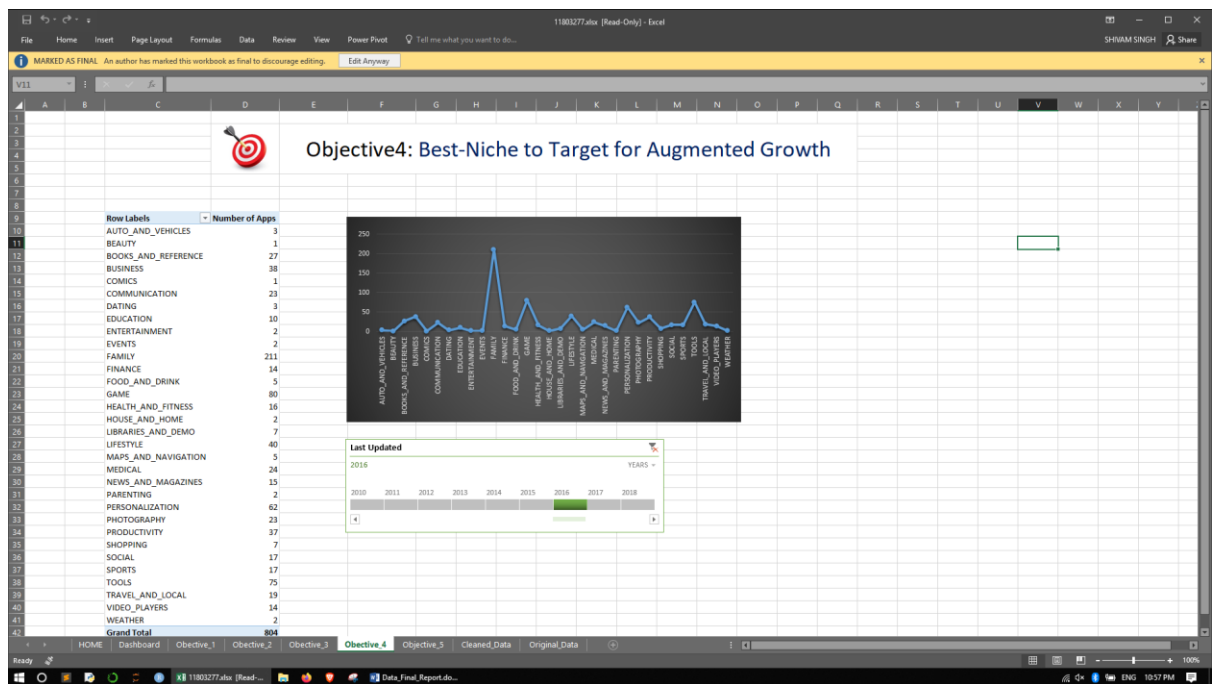


Thus, from this analysis it is quite clear that the gaming Category has the most number of downloads and it the most popular apps category. This is because of the fact that Games already have a target-audience and they are directed from other platforms to these Gaming Apps on Playstore. Thus, it is a great idea to have a following or a platform presence already before launching an app on Playstore, as it gives more turn-around ratio.

#### 4. Finding the Best-Niche to Target for Augmented Growth:

This question is same as the previous question, but here we are trying to identify the target-audience for the probability of highest success. It is quite evident that one should launch apps in a particular niche, especially targeting the categories which have least number of apps like Finance and Health. These apps need skilled efforts for their development and maintenance. Targeting one or more of these categories will allow producing for a category which has scarce resources, thus less competition. To verify this, we need to see the apps which have gone unmaintained for a long time, thus being discarded by the developers team itself.



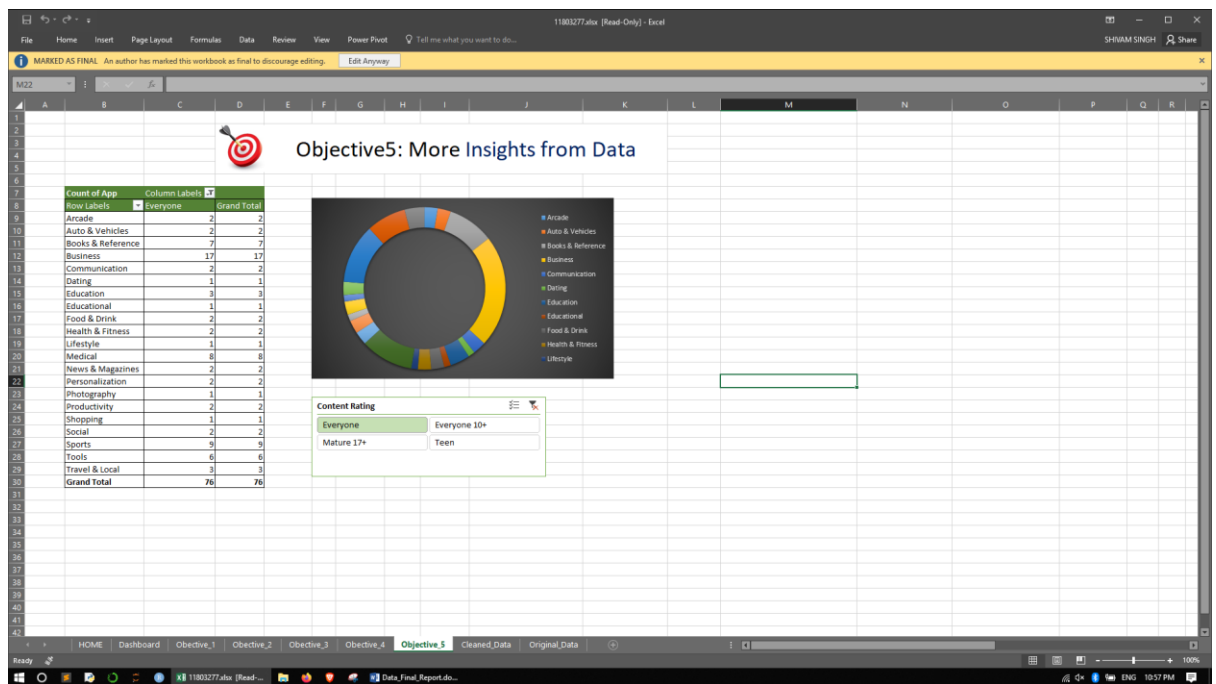


From this chart, it is clear that most of the apps are in running mode but a lot of the apps in categories with bulk options are discarded. On the other hand, Apps in categories with scarce options are doing very well. From the analysis, it is now pretty certain that to succeed on Playstore, one needs to create an app for a very specific niche, which have less number of total apps and charge upfront. People would pay for the less options available to them.

## 5. Finding Discovering Insights from Data to predict the best-strategies that facilitate growth:

As already discussed in previous Objectives, the best way to augment growth opportunities is to create an app for a very specific niche, which have less number of total apps and charge upfront. People would pay for the less options available to them. Categories like BEAUTY PRODUCTS, FINANCE and HEALTH are the top categories to publish. Let's analyze the type of content which is the best-suited for success. For this analysis, we create another pivot table with Category and Genre to which the app belongs and against all entries we map the count of apps in each specific content rating, like for everyone, adults etc.





Thus, from this analysis it is certain that not all apps do well on Playstore. There are a lot of apps, rated for Everyone and 13+. These two categories, in themselves constitute for about 50% of the share in total apps category. Adult apps are very few, they mainly belong to the DATING Category and FINANCE Category. Hence, it is advisable to create apps which have healthy content and can be marked FOR EVERYONE. This would increase the total number of audience for the app by significant number and thus, increase the turn-around rate.

## Summary:

Thus, from all the analysis we can conclude that the best way to grow on Playstore is to publish apps which are nice-specific and have a high demand but the available options are limited. Then, one should try to opt for bringing the engaged audience already using the app from some other platform to the app on Playstore. One must also try to maintain the app by releasing updates on a regular basis. The content rated FOR EVERYONE is considered good as it engages mere people.

# Final Dashboard



## REFERENCES AND BIBLIOGRAPHY

- Youtube
- Analytics Vidhya
- Kaggle