Play Store Apps Data Analysis By Kishan

Launcher | Playstore_Apps.ipynb

Code | Notebook | Python 3 (ipykernel)

[1]:
```
#PlayStore App Analysis By Kishan
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import warnings

warnings.filterwarnings("ignore")

%matplotlib inline
```

[2]:
```
df=pd.read_csv('https://raw.githubusercontent.com/krishnaik06/playstore-Dataset/main/googleplaystore.csv')
df.head()
```

[2]:

	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres	Last Updated	Current Ver	Android Ver
0	Photo Editor & Candy Camera & Grid & ScrapBook	ART_AND_DESIGN	4.1	159	19M	10,000+	Free	0	Everyone	Art & Design	January 7, 2018	1.0.0	4.0.3 and up
1	Coloring book moana	ART_AND_DESIGN	3.9	967	14M	500,000+	Free	0	Everyone	Art & Design;Pretend Play	January 15, 2018	2.0.0	4.0.3 and up
2	U Launcher Lite – FREE Live Cool Themes, Hide ...	ART_AND_DESIGN	4.7	87510	8.7M	5,000,000+	Free	0	Everyone	Art & Design	August 1, 2018	1.2.4	4.0.3 and up
3	Sketch - Draw & Paint	ART_AND_DESIGN	4.5	215644	25M	50,000,000+	Free	0	Teen	Art & Design	June 8, 2018	Varies with device	4.2 and up
4	Pixel Draw - Number Art Coloring Book	ART_AND_DESIGN	4.3	967	2.8M	100,000+	Free	0	Everyone	Art & Design;Creativity	June 20, 2018	1.1	4.4 and up

[3]:
```
df.shape
```

```
df_copy['Last Updated'] = pd.to_datetime(df_copy['Last Updated'])
df_copy['Day']=df_copy['Last Updated'].dt.day
df_copy['Month']=df_copy['Last Updated'].dt.month
df_copy['Year']=df_copy['Last Updated'].dt.year
```

```
df_copy.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 10840 entries, 0 to 10840
Data columns (total 16 columns):
 #   Column          Non-Null Count  Dtype
---  ------          --------------  -----
 0   App             10840 non-null  object
 1   Category        10840 non-null  object
 2   Rating          9366 non-null   float64
 3   Reviews         10840 non-null  int64
 4   Size            9145 non-null   float64
 5   Installs        10840 non-null  int64
 6   Type            10839 non-null  object
 7   Price           10840 non-null  float64
 8   Content Rating  10840 non-null  object
 9   Genres          10840 non-null  object
 10  Last Updated    10840 non-null  datetime64[ns]
 11  Current Ver     10832 non-null  object
 12  Android Ver     10838 non-null  object
 13  Day             10840 non-null  int32
 14  Month           10840 non-null  int32
 15  Year            10840 non-null  int32
dtypes: datetime64[ns](1), float64(3), int32(3), int64(2), object(7)
memory usage: 1.3+ MB
```

```
df_copy.to_csv('data/google_cleaned.csv')
```

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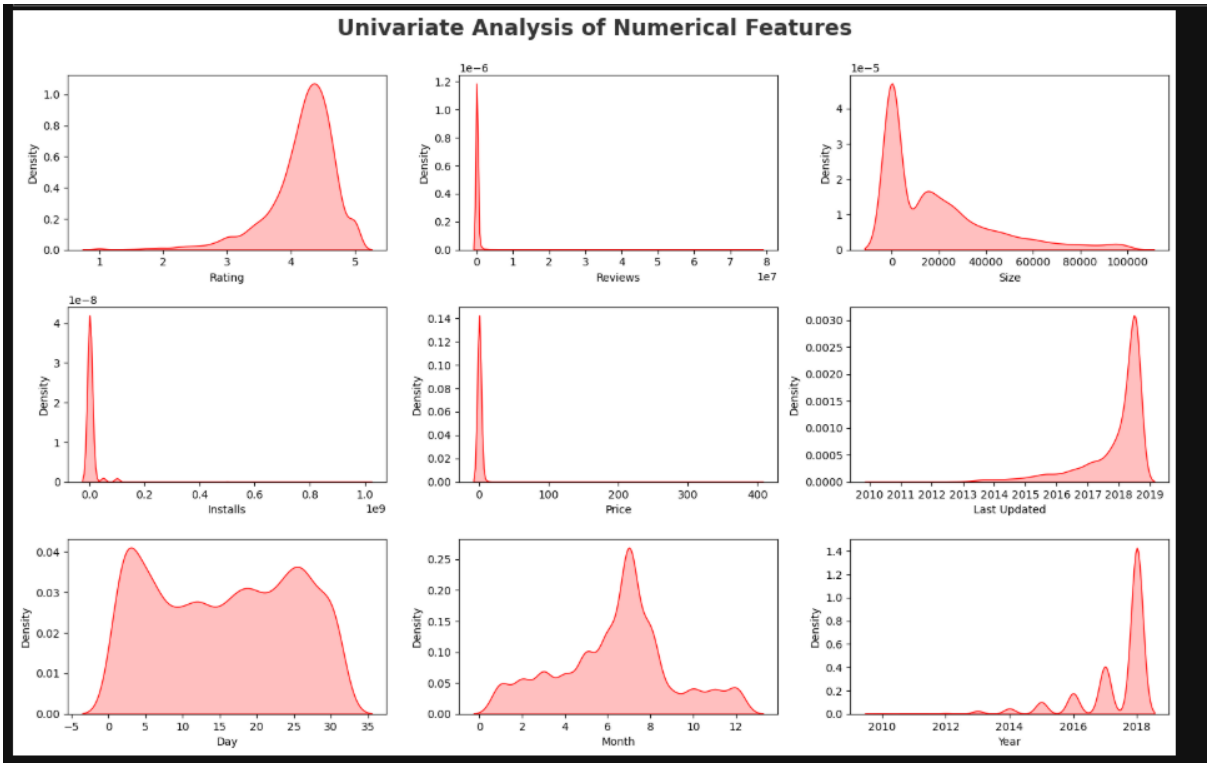
```
: ## Proportion of count data on numerical columns
import matplotlib.pyplot as plt
import seaborn as sns
import warnings

warnings.filterwarnings("ignore")

%matplotlib inline
plt.figure(figsize=(15, 15))
plt.suptitle('Univariate Analysis of Numerical Features', fontsize=20, fontweight='bold', alpha=0.8, y=1.)

for i in range(0, len(numeric_features)):
    plt.subplot(5, 3, i+1)
    sns.kdeplot(x=df_copy[numeric_features[i]],shade=True, color='r')
    plt.xlabel(numeric_features[i])
    plt.tight_layout()
plt.show()
```



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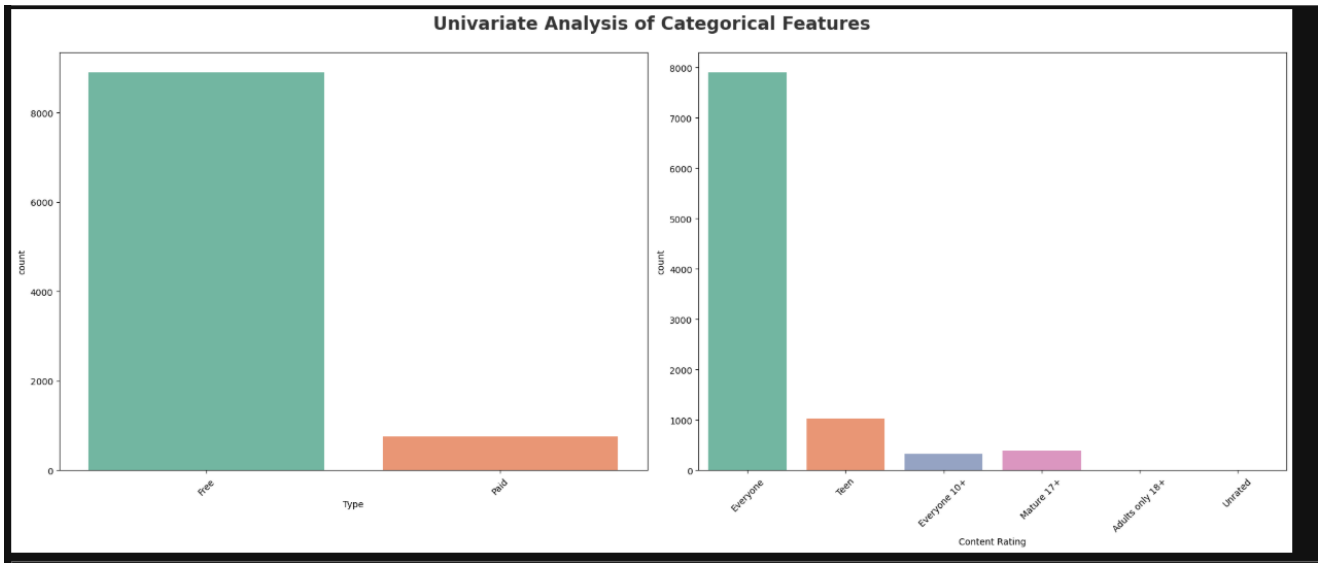
```
# categorical columns
plt.figure(figsize=(20, 15))
plt.suptitle('Univariate Analysis of Categorical Features', fontsize=20, fontweight='bold', alpha=0.8, y=1.)
category = [ 'Type', 'Content Rating']
for i in range(0, len(category)):
    plt.subplot(2, 2, i+1)
    sns.countplot(x=df_copy[category[i]],palette="Set2")
    plt.xlabel(category[i])
    plt.xticks(rotation=45)
    plt.tight_layout()
plt.show()
```



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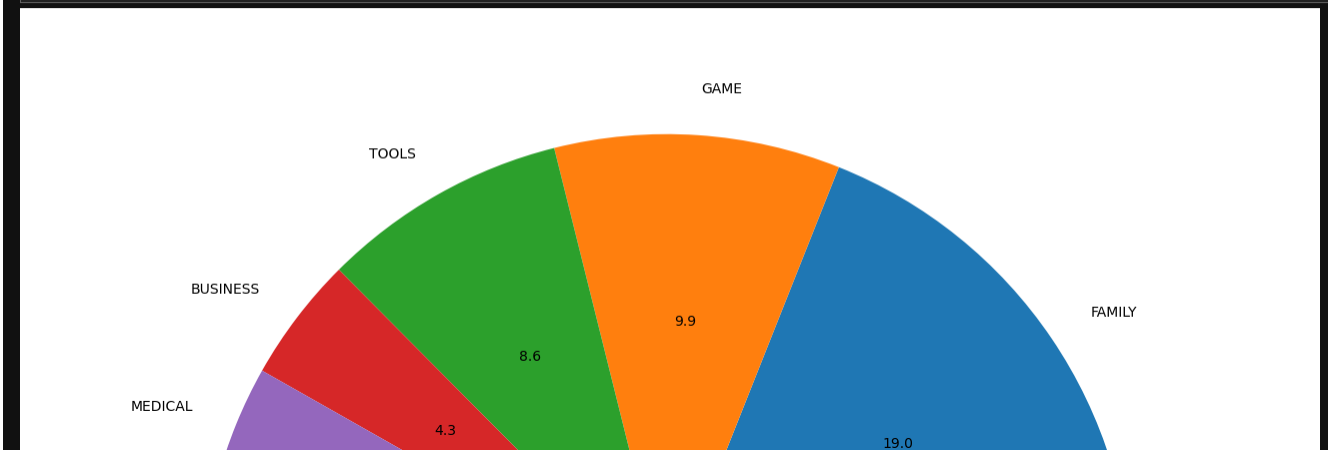
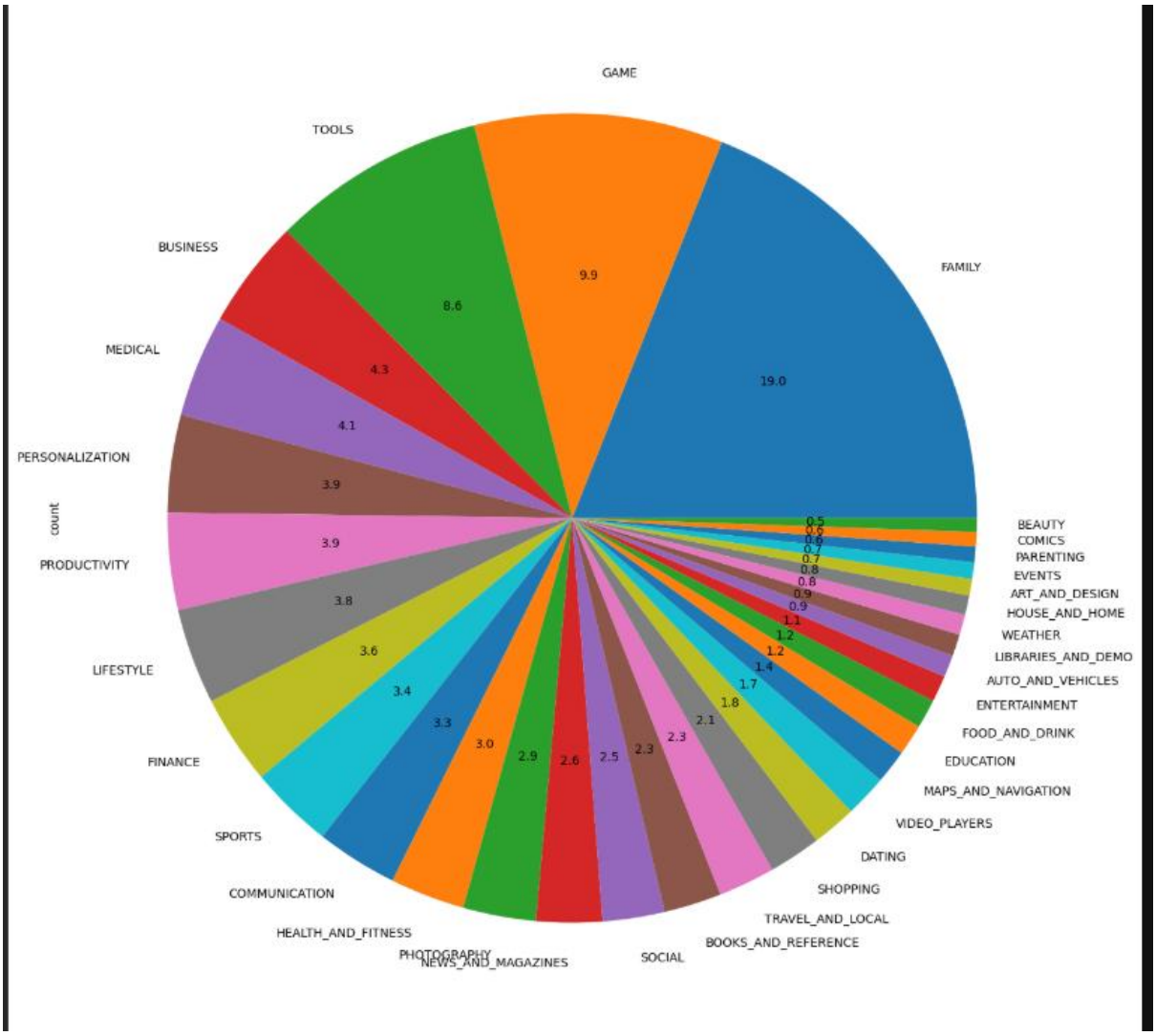
```
df_copy['Category'].value_counts().plot.pie(y=df_copy['Category'],figsize=(15,20),autopct='%1.1f')
plt.show()
```





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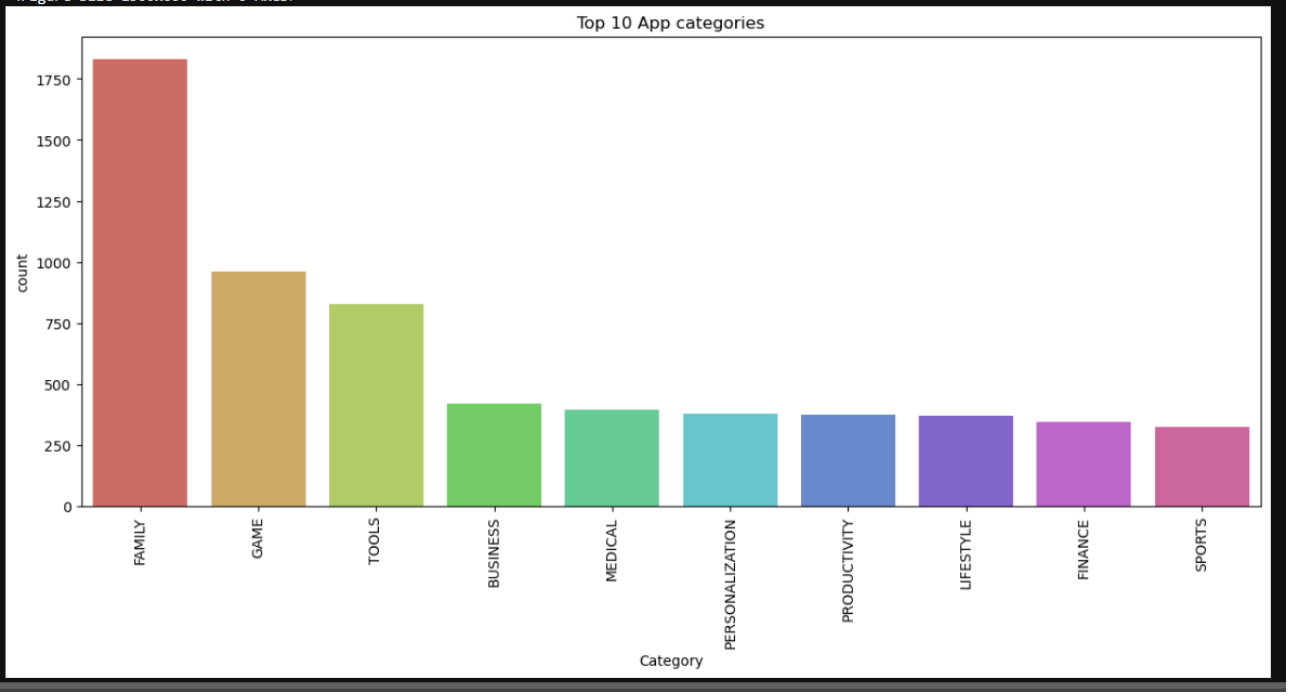
```
plt.figure(figsize=(15,6))
sns.barplot(x=category.index[:10], y ='count',data = category[:10],palette='hls')
plt.title('Top 10 App categories')
plt.xticks(rotation=90)
plt.show()
```

```
<Figure size 1500x600 with 0 Axes>
```




```
df_copy.head(3)
```

	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres	Last Updated	Current Ver	Android Ver	Day	Month	Year
0	Photo Editor & Candy Camera & Grid & ScrapBook	ART_AND_DESIGN	4.1	159	19000.0	10000	Free	0.0	Everyone	Art & Design	2018-01-07	1.0.0	4.0.3 and up	7	1	2018
1	Coloring book moana	ART_AND_DESIGN	3.9	967	14000.0	500000	Free	0.0	Everyone	Art & Design;Pretend Play	2018-01-15	2.0.0	4.0.3 and up	15	1	2018
2	U Launcher Lite – FREE Live Cool Themes, Hide ...	ART_AND_DESIGN	4.7	87510	8.7	5000000	Free	0.0	Everyone	Art & Design	2018-08-01	1.2.4	4.0.3 and up	1	8	2018

```
df_cat_installs = df_copy.groupby(['Category'])['Installs'].sum().sort_values(ascending = False).reset_index()
df_cat_installs.Installs = df_cat_installs.Installs/1000000000# converting into billions
df2 = df_cat_installs.head(10)
plt.figure(figsize = (14,10))
sns.set_context("talk")
sns.set_style("darkgrid")

ax = sns.barplot(x = 'Installs' , y = 'Category' , data = df2 )
ax.set_xlabel('No. of Installations in Billions')
ax.set_ylabel('')
ax.set_title("Most Popular Categories in Play Store", size = 20)
plt.show()
```

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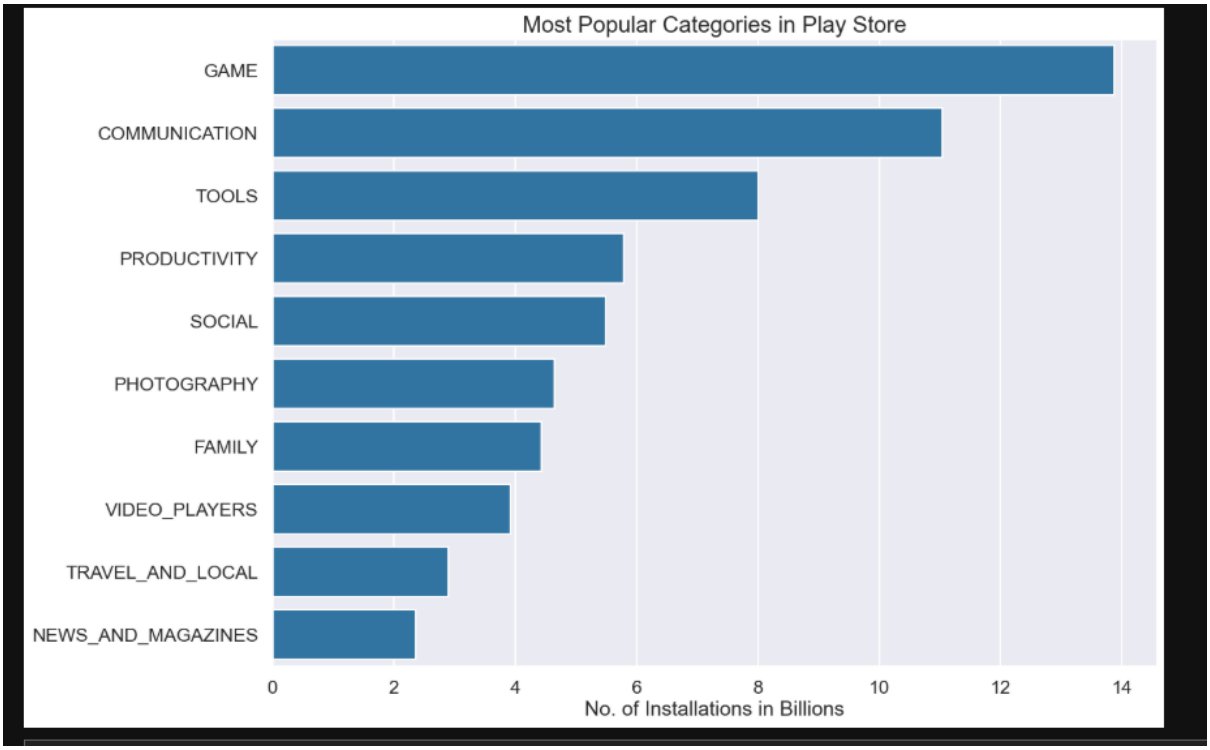


```
dfa = df_copy.groupby(['Category' ,'App'])['Installs'].sum().reset_index()
dfa = dfa.sort_values('Installs', ascending = False)
apps = ['GAME', 'COMMUNICATION', 'PRODUCTIVITY', 'SOCIAL' ]
sns.set_context("poster")
sns.set_style("darkgrid")

plt.figure(figsize=(40,30))

for i,app in enumerate(apps):
    df2 = dfa[dfa.Category == app]
    df3 = df2.head(5)
    plt.subplot(4,2,i+1)
    sns.barplot(data= df3,x= 'Installs' ,y='App' )
    plt.xlabel('Installation in Millions')
    plt.ylabel('')
    plt.title(app,size = 20)

plt.tight_layout()
plt.subplots_adjust(hspace= .3)
plt.show()
```

GAME

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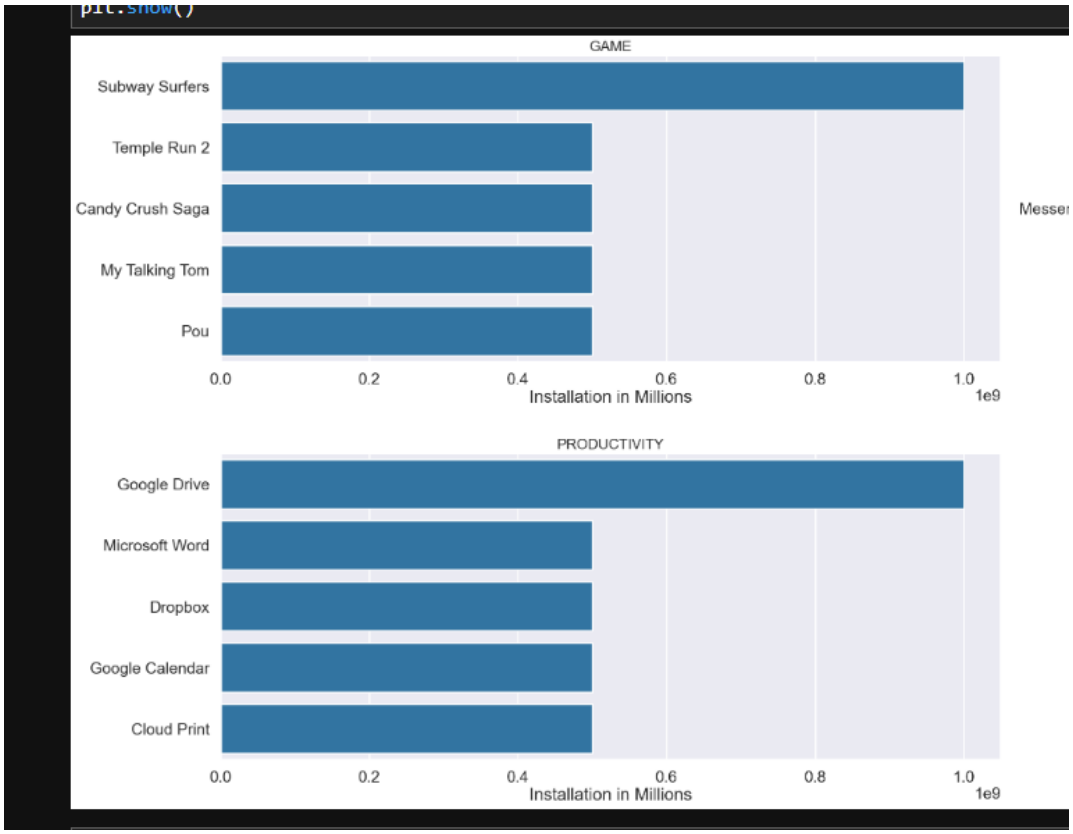

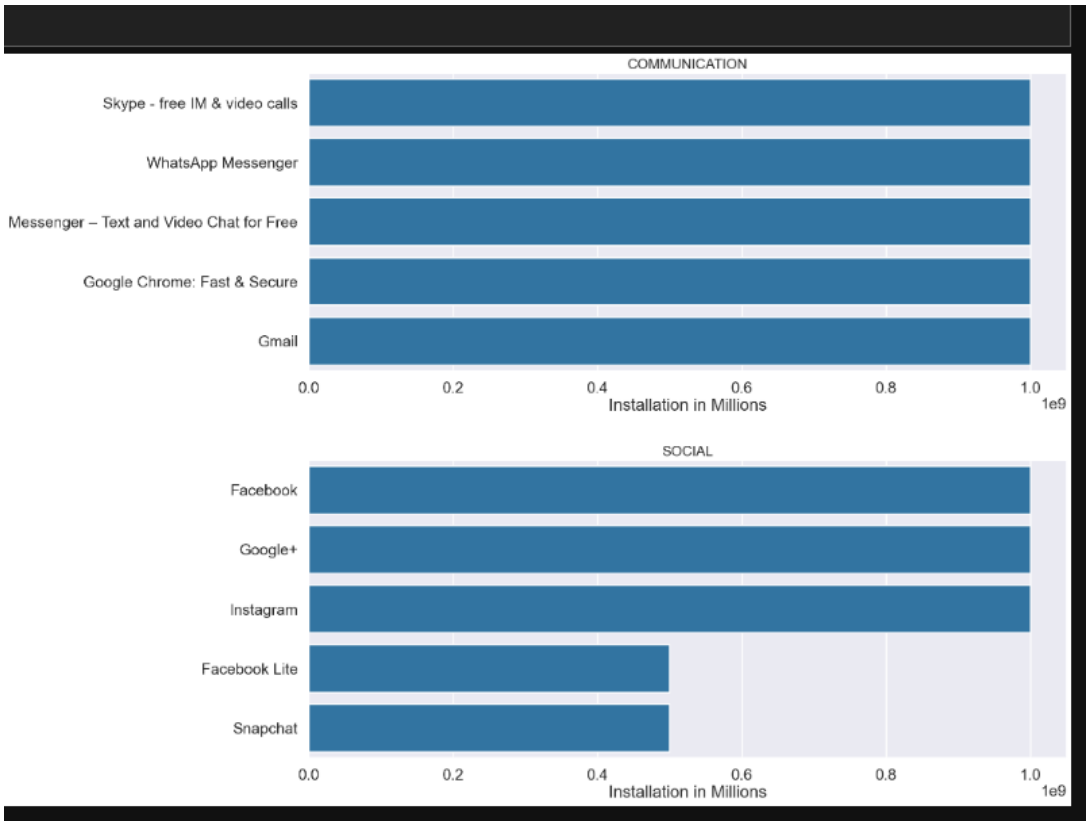

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```
rating = df_copy.groupby(['Category','Installs', 'App'])['Rating'].sum().sort_values(ascending = False).reset_index()
```

```
rating[rating.Rating == 5.0]
```

	Category	Installs	App	Rating
0	FAMILY	10	DN Employee	5.0
1	FAMILY	10	Chronolink DX	5.0
2	MEDICAL	500	FHR 5-Tier 2.0	5.0
3	HEALTH_AND_FITNESS	10	CB Fit	5.0
4	MEDICAL	100	Zen Leaf	5.0
...	...	...	...	...
266	FAMILY	10	Story Time FD	5.0
267	FAMILY	50	DYPSOET	5.0
268	LIBRARIES_AND_DEMO	1000	Nur tafsiri 1-ci cild	5.0
269	LIBRARIES_AND_DEMO	1000	Eternal life	5.0
270	BUSINESS	1000	Jobs in Canada - Emplois au Canada	5.0

271 rows × 4 columns