```
'''

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YEAR : SECOND

'''
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```
#url of dataset-https://www.kaggle.com/gregorut/videogamesales
# EDA (EXPLORATORY DATA ANALYSIS)
# DATASET OF VIDEO GAME SALES
import pandas as pd
import seaborn as sns
import matplotlib
import matplotlib.pyplot as plt
%matplotlib inline
sns.set_style("darkgrid")

df = pd.read_csv("/content/vgsales.csv")
df.head()
```

	Rank	Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sa
0	1	Wii Sports	Wii	2006.0	Sports	Nintendo	41.49	29.02	3
1	2	Super Mario Bros.	NES	1985.0	Platform	Nintendo	29.08	3.58	6
2	3	Mario Kart Wii	Wii	2008.0	Racing	Nintendo	15.85	12.88	3
3	4	Wii Sports Resort	Wii	2009.0	Sports	Nintendo	15.75	11.01	3

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16598 entries, 0 to 16597
Data columns (total 11 columns):
 #   Column        Non-Null Count  Dtype  
---  ------        --------------  -----  
 0   Rank          16598 non-null  int64  
 1   Name          16598 non-null  object 
 2   Platform      16598 non-null  object 
 3   Year          16327 non-null  float64
 4   Genre         16598 non-null  object 
 5   Publisher     16540 non-null  object 
 6   NA_Sales      16598 non-null  float64
 7   EU_Sales      16598 non-null  float64
 8   JP_Sales      16598 non-null  float64
 9   Other_Sales   16598 non-null  float64
 10  Global_Sales  16598 non-null  float64
dtypes: float64(6), int64(1), object(4)
memory usage: 1.4+ MB
```

```
missing_val_count_by_column = (df.isnull().sum())
missing_val_count_by_column[missing_val_count_by_column > 0]
```

```
Year         271
Publisher     58
dtype: int64
```

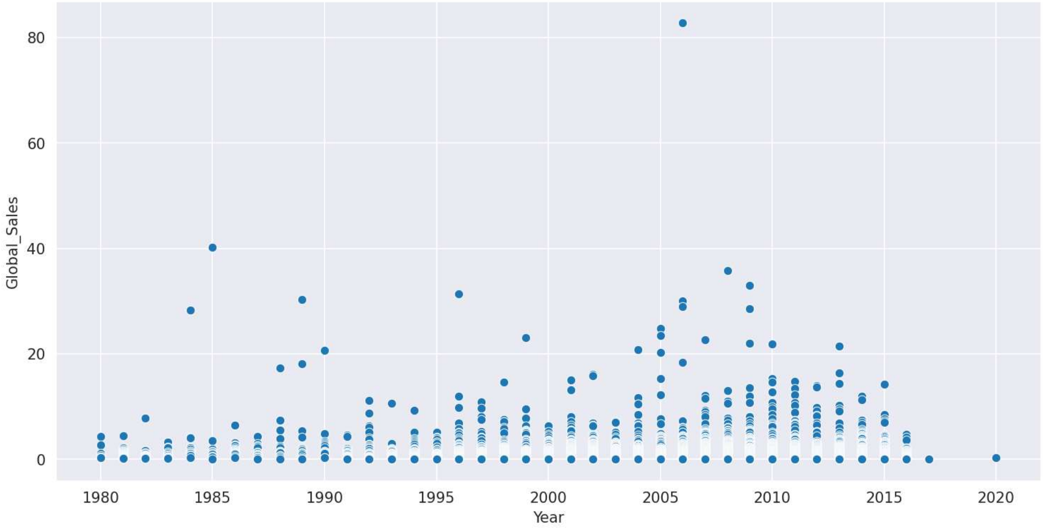
```
# dropping null values if exist
df.dropna(subset=["Publisher"], inplace=True)
```

```
# Fill missing cells with column median
df["Year"].fillna((df["Year"].median()), inplace=True)
```

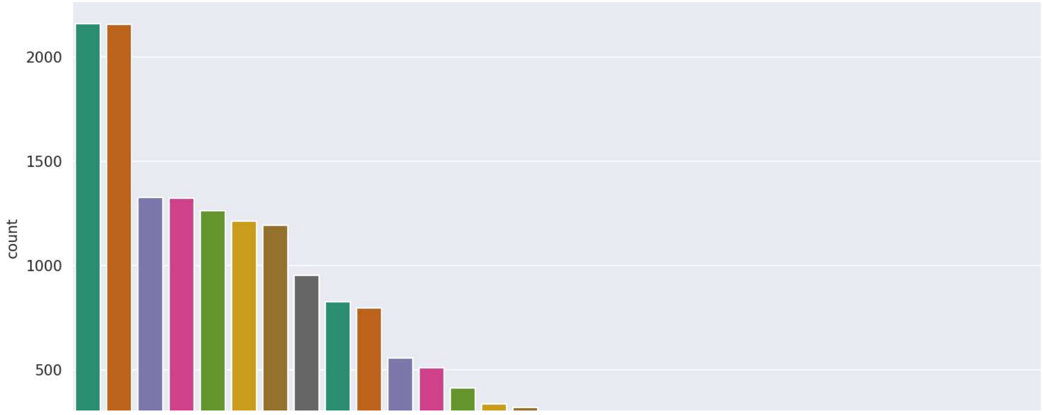
```
#Statistical Analysis
df.describe().transpose()
```

	count	mean	std	min	25%	50%	75%	max
Rank	16540.0	8294.197642	4790.703200	1.00	4143.75	8292.50	12440.25	16600.00
Year	16540.0	2006.414510	5.788794	1980.00	2003.00	2007.00	2010.00	2020.00
NA_Sales	16540.0	0.265079	0.817929	0.00	0.00	0.08	0.24	41.49

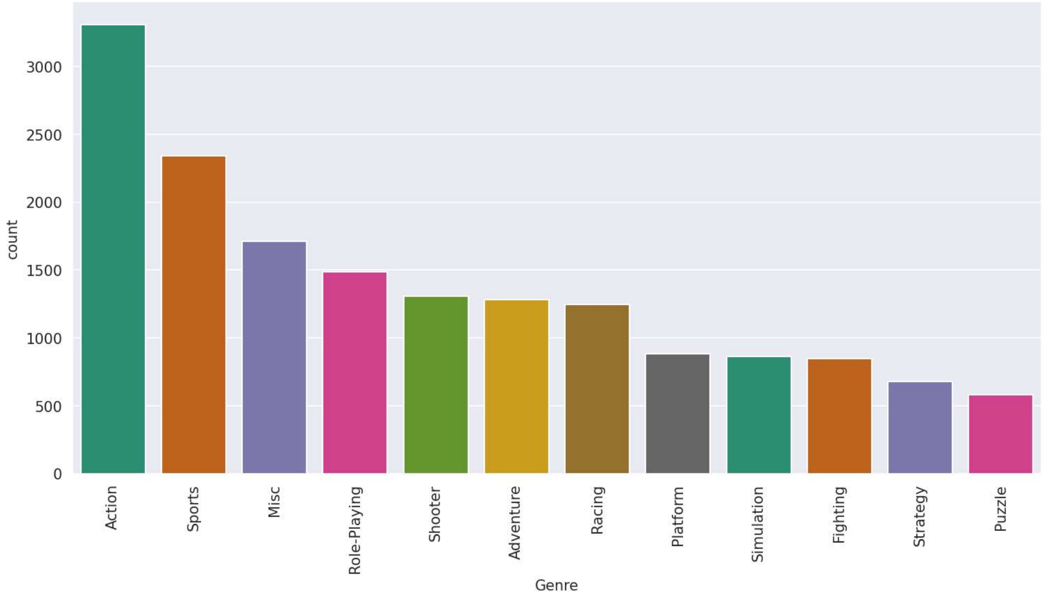
```
#Exploring the relationship between Year and Global Sales
plt.figure(figsize=(12,6), dpi=150)
sns.scatterplot(data=df, x="Year", y="Global_Sales")
plt.show()
```



```
#Total Count of Games for each Platform
plt.figure(figsize=(12,6), dpi=150)
sns.countplot(data=df,
              x="Platform",
              order = df["Platform"].value_counts().index,
              palette="Dark2")
plt.xticks(rotation=90)
plt.show()
```



```
#Total Count of Games for each Genre
plt.figure(figsize=(12,6), dpi=150)
sns.countplot(data=df,
              x="Genre",
              order = df["Genre"].value_counts().index,
              palette="Dark2")
plt.xticks(rotation=90)
plt.show()
```



```
# Using the 'nlargest()' method, we can easily extract the top n values of a dataframe
df.nlargest(10, "Global_Sales")
```

	Rank	Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	G
0	1	Wii Sports	Wii	2006.0	Sports	Nintendo	41.49	29.02	3.77	8.46	
1	2	Super Mario Bros.	NES	1985.0	Platform	Nintendo	29.08	3.58	6.81	0.77	
2	3	Mario Kart Wii	Wii	2008.0	Racing	Nintendo	15.85	12.88	3.79	3.31	
3	4	Wii Sports Resort	Wii	2009.0	Sports	Nintendo	15.75	11.01	3.28	2.96	

```
# Which game made the most sales per region and globally?
print(f"NA: {df.nlargest(1, 'NA_Sales').values[0,1]}")
print(f"EU: {df.nlargest(1, 'EU_Sales').values[0,1]}")
print(f"JP: {df.nlargest(1, 'JP_Sales').values[0,1]}")
print(f"Other: {df.nlargest(1, 'Other_Sales').values[0,1]}")
print(f"Global: {df.nlargest(1, 'Global_Sales').values[0,1]}")
```

```
NA: Wii Sports
EU: Wii Sports
JP: Pokemon Red/Pokemon Blue
Other: Grand Theft Auto: San Andreas
Global: Wii Sports
```

```
#Which Publishers made the most sales?
sales_publisher = df.groupby("Publisher").agg({"Global_Sales": pd.Series.sum})
sales_publisher.nlargest(5, "Global_Sales")
```

	Global_Sales
Publisher	
Nintendo	1786.56
Electronic Arts	1110.32
Activision	727.46
Sony Computer Entertainment	607.50
Ubisoft	474.72