



# **TUNKU ABDUL RAHMAN UNIVERSITY COLLEGE**

## **FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY**

Bachelor of Science in Management Mathematics with Computing

Year 3 Semester 1

RMM (Tutorial Group 2 & 3)

BAMS3043 Mathematical and Statistical Software

### **Assignment 3**

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**Lecturer / Tutor's name: Dr. Tan Yan Bin**

## 1. Charts

Pie Chart - Total Percentage of **Count** of Common Platforms such as XOne,PS4,PC

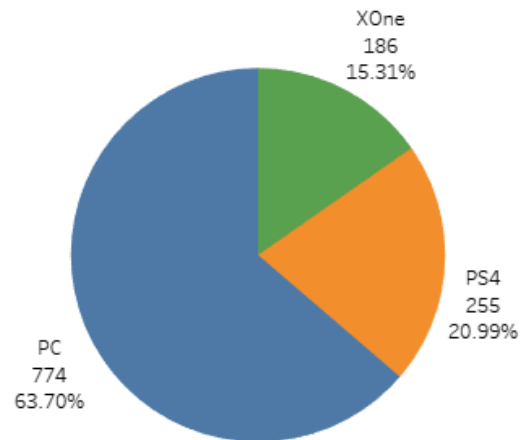


Diagram 1.1

This pie chart shows the number of common platforms such as PC, PS4 and Xbox One. The PC has the highest percentage which is 63.70%, followed by PS4 with 20.99% and Xbox One with 15.31%.

## Total Percentage of Count of Genre

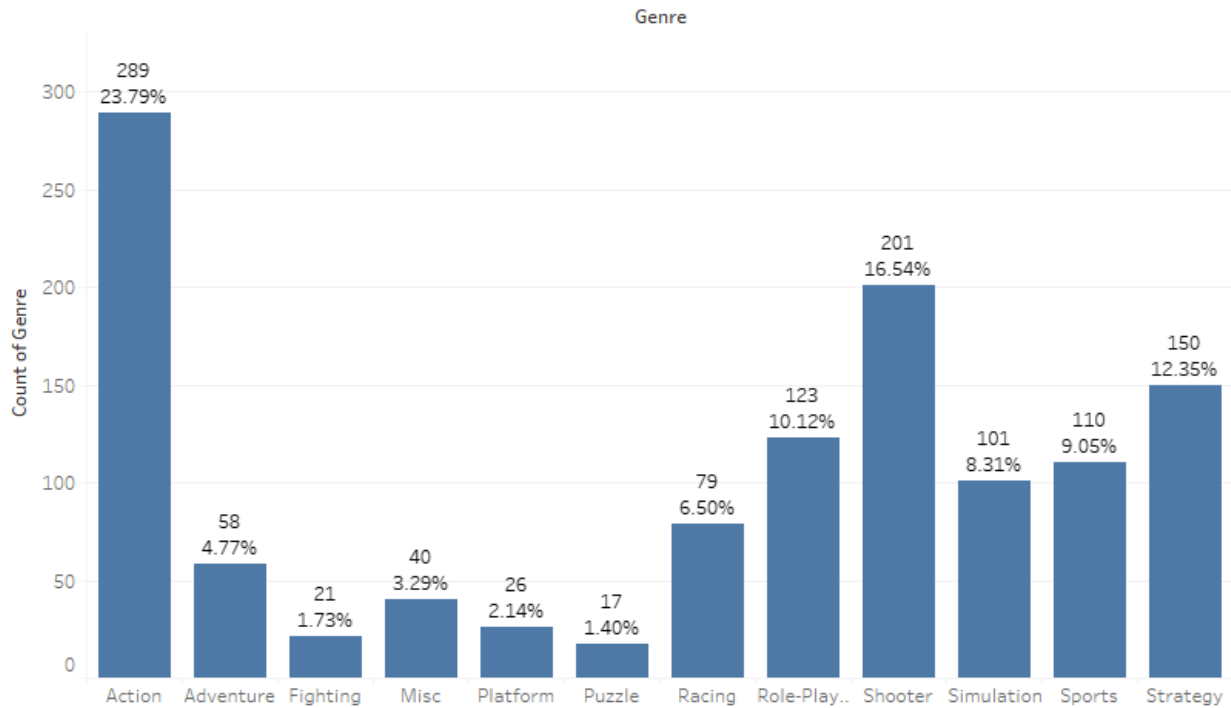


Diagram 2.1

This bar chart shows the percentage of the number of genres. From the chart, we can see that the action genre reaches the highest number among all the genres with 23.79% out of the total percentage.

## Total Percentage of Global Sales by Genre

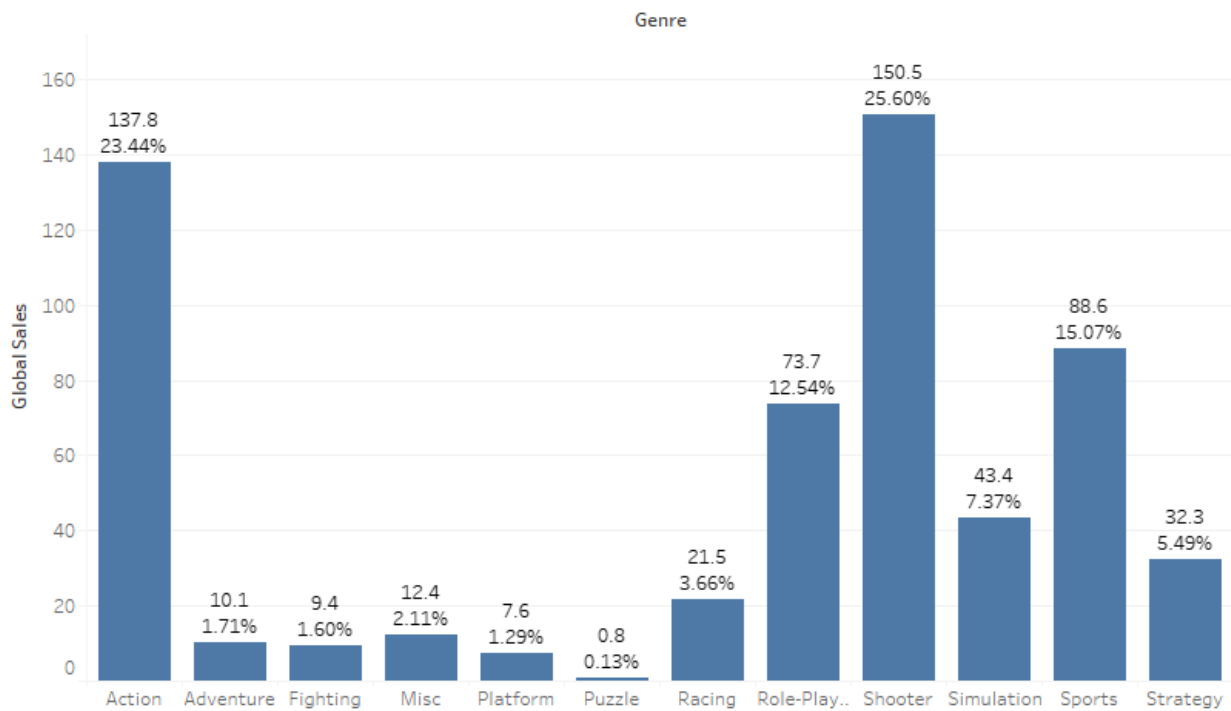


Diagram 2.2

This bar chart shows the percentage of the global sales by genre. Shooter genre has the highest global sales, followed by action genre and sports genre, and so on and so forth.

Total Percentage of Critic Count by Genre

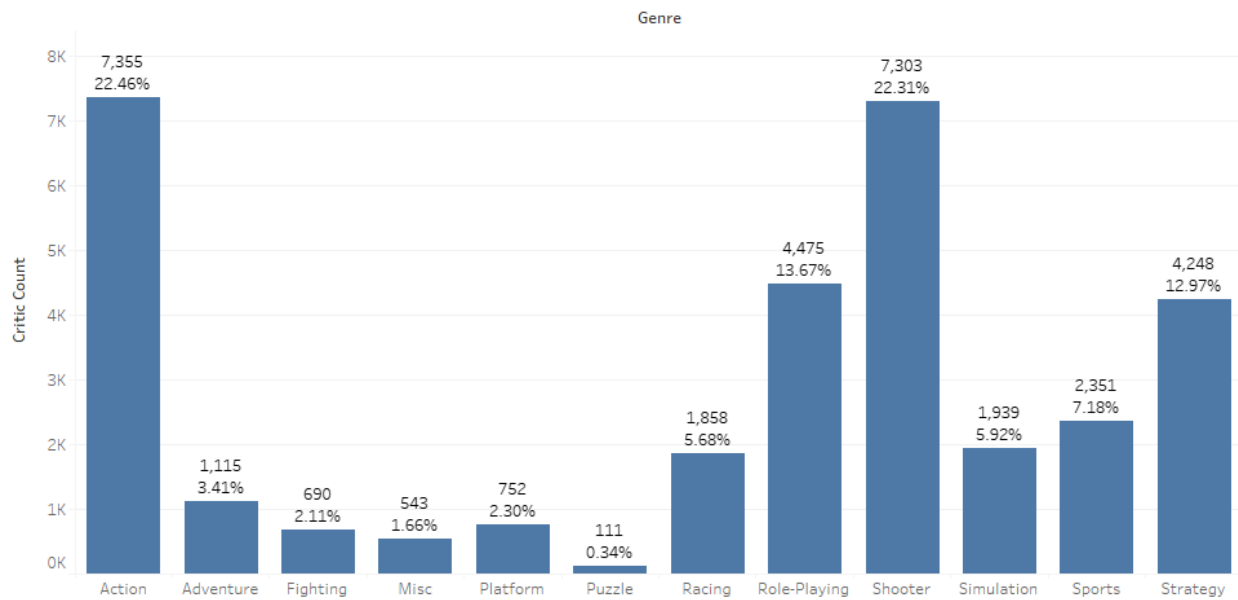


Diagram 2.3

This bar chart shows the percentage of critic count by genre. We can see that the action and the shooter are the two genres that has the highest critic count among all the genres.

Total Percentage of Critic Score by Genre

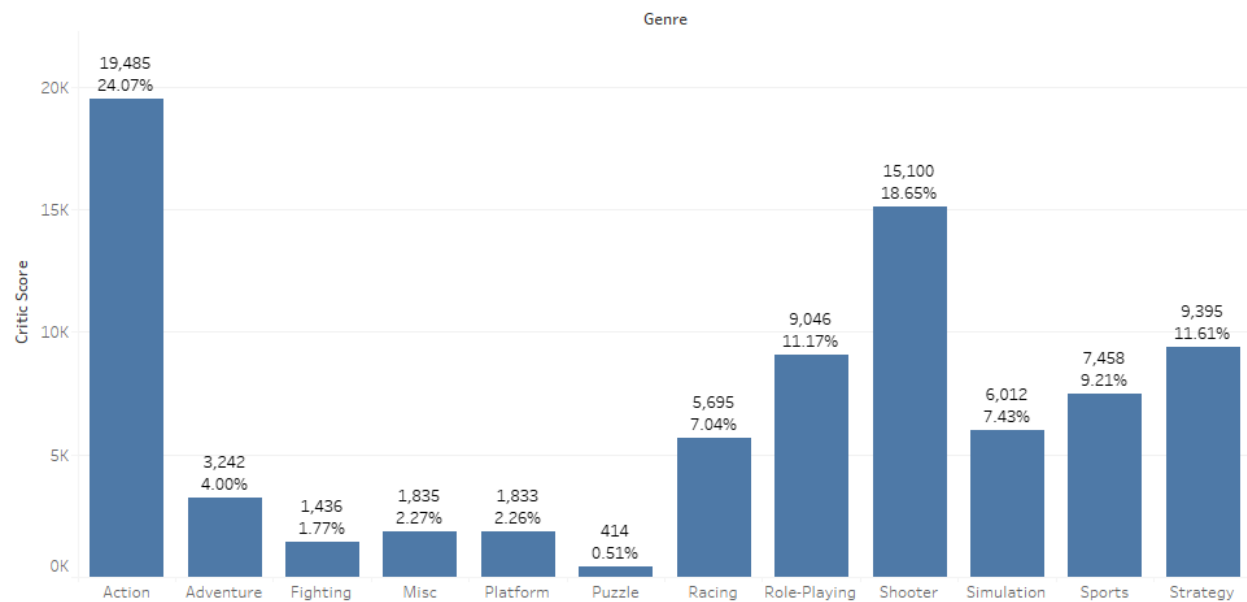


Diagram 2.4

This bar chart shows the percentage of critic score by genre. The action genre has the highest score with 24.07% out of the total percentage.

**Stacked Bar Chart - Total Percentage of Global Sales by Each Genre within XOne,PS4,PC**

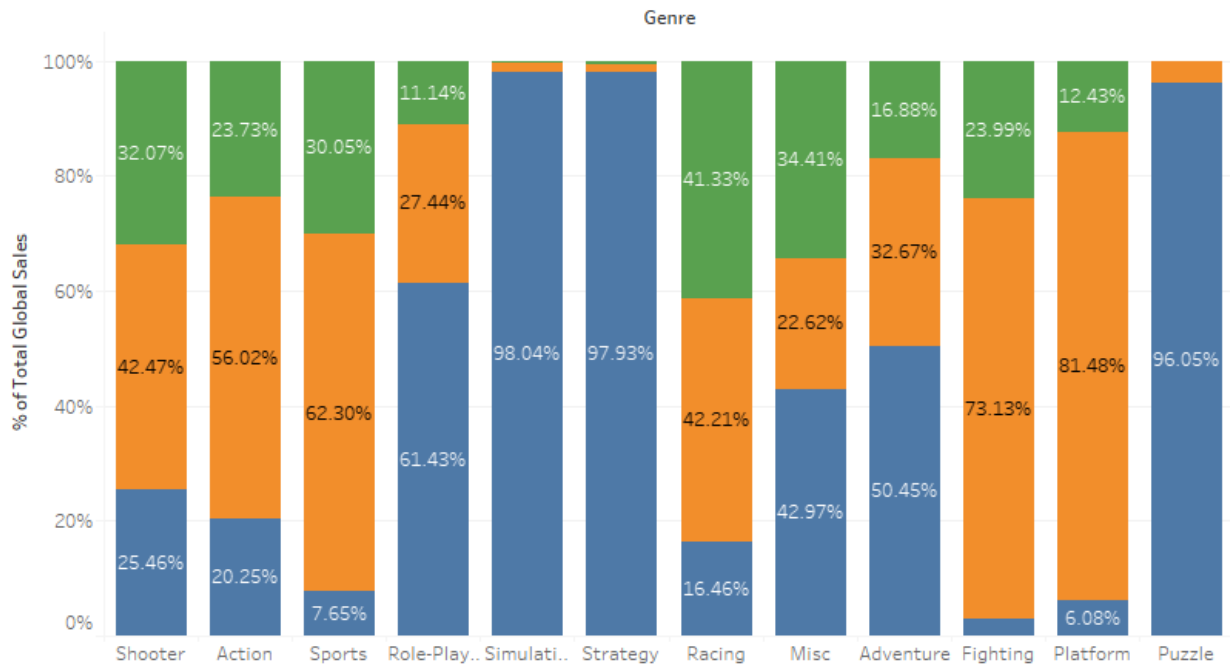


Diagram 3.1

This chart shows the percentage of global sales by each genre within the common platforms such as PC, PS4 and Xbox One. The blue color represents PC, orange color represents PS4, and the green color represents Xbox One. We can see that both PC and PS4 have achieved the highest global sales on different genres respectively.

## Side-by-Side Bar Chart - Total Percentage of Global Sales by Each Genre within XOne,PS4,PC

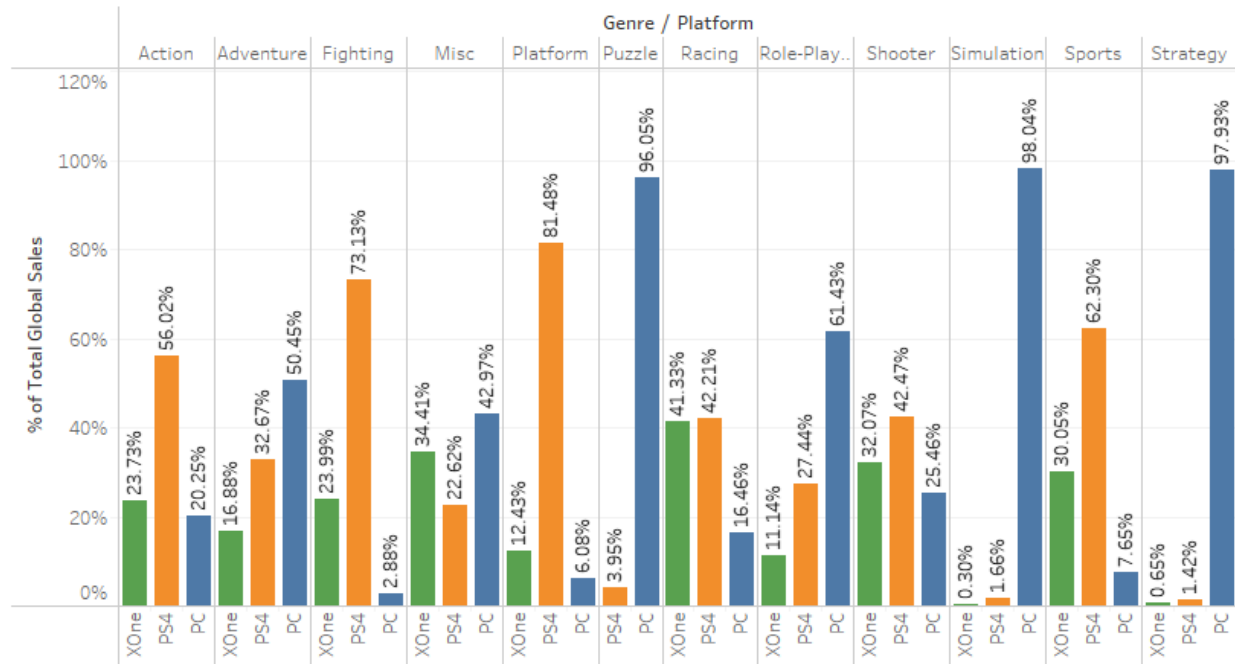


Diagram 3.2

This chart shows the same information as the diagram 3.1 but in a different visual way.



### Total Percentage of User Score by Rating

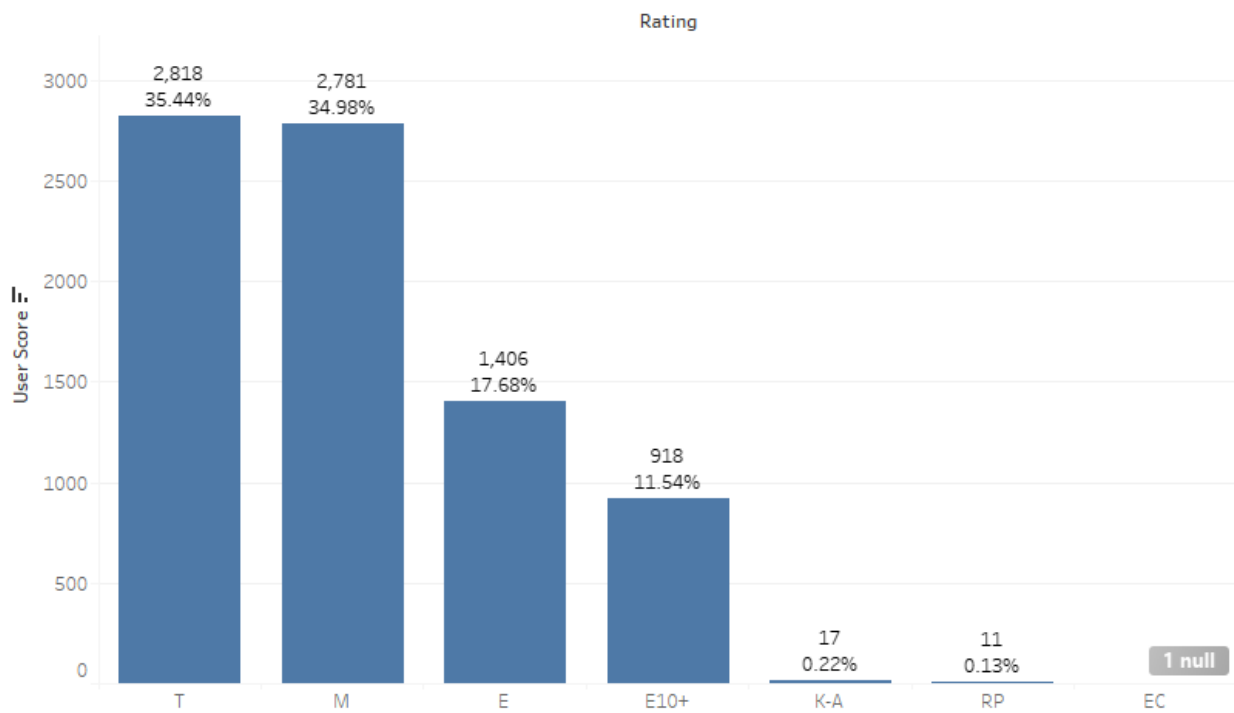


Diagram 4.1

This bar chart shows the percentage of user score by ESRB game rating. We can see that rating T and M are the most popular ratings according to the user score. The EC rating is no longer used as of 2018, therefore, it is a null value.

Total Percentage of Global Sales by Rating

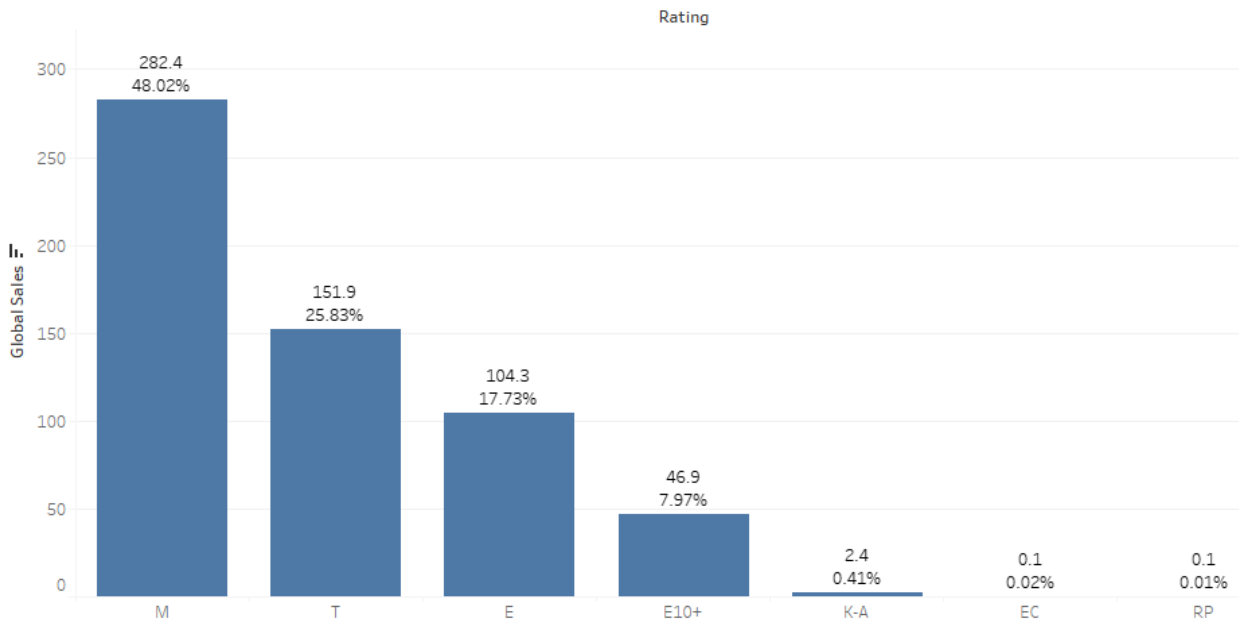


Diagram 4.2

This bar chart shows the percentage of global sales by ESRB game rating. We can see that rating M is the rating that has the highest global sales which is 48.02%. The EC and RP ratings have the lowest global sales with 0.02% and 0.01% respectively.

## Side-by-Side - Total Percentage of **Global Sales** by **Rating** and **Platform**

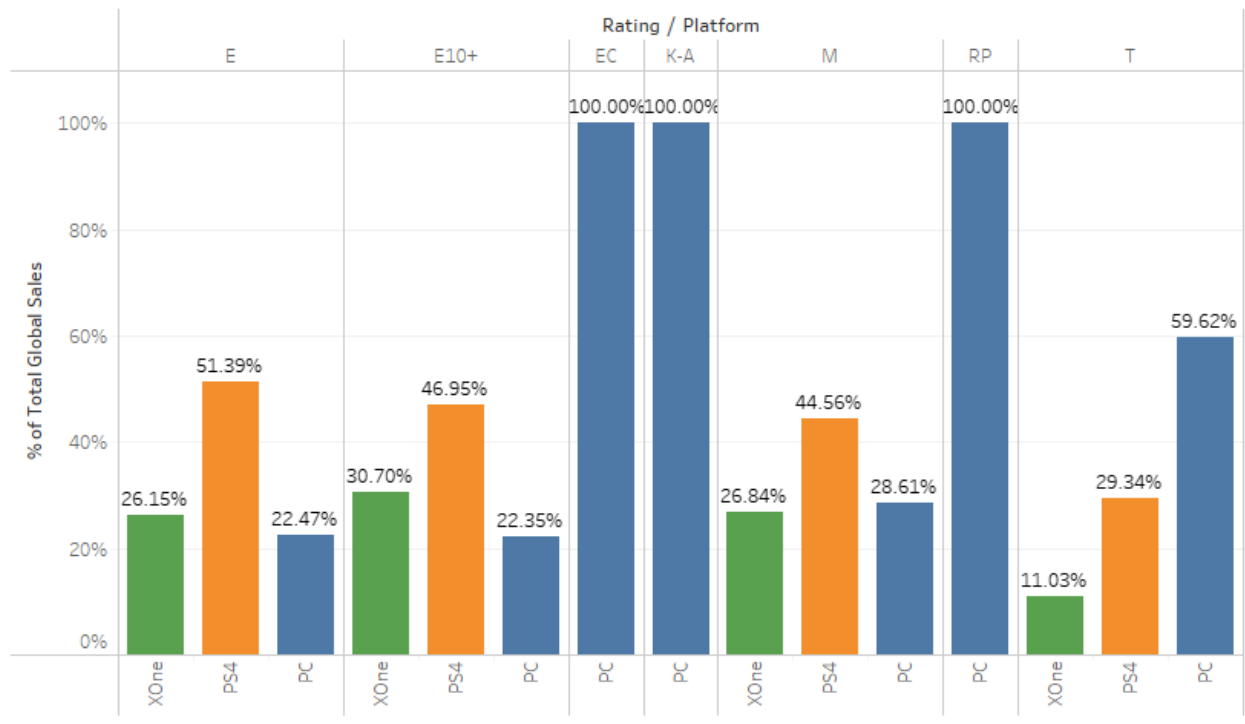


Diagram 5.1

This side-by-side bar chart shows the global sales of different ratings on three common platforms. We can see that the EC, K-A, and RP ratings only occur on the PC platform. The PS4 platform has achieved the highest global sales among the platforms on E, E10+, and M ratings with 51.39%, 46.95%, and 44.56% respectively.

Line Chart of Sales

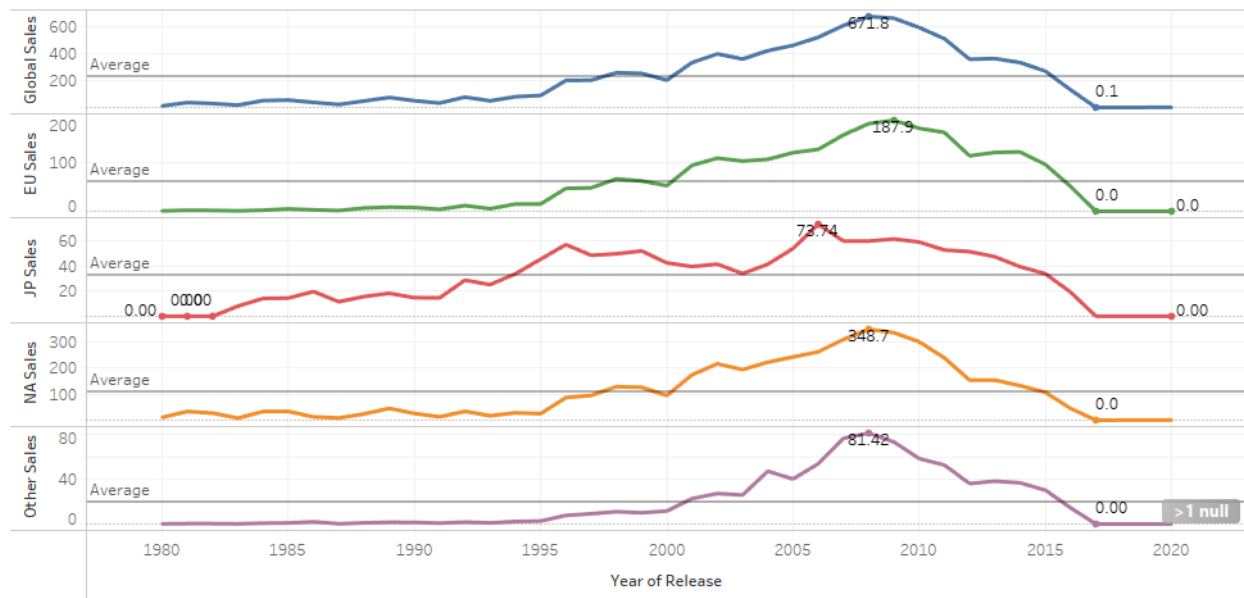


Diagram 6.1

This line chart shows the sales of different areas every year. First line is global sales with the highest sales being 671.8 in 2008. The second line is EU sales with the highest sales being 187.9 in 2009. The third line is JP sales with the highest sales being 73.74 in 2006. The fourth line is NA sales with the highest sales being 348.7 in 2008. The last last is other sales with the highest sales being 81.42 in 2008.

## Total Percentage of Count of Platform

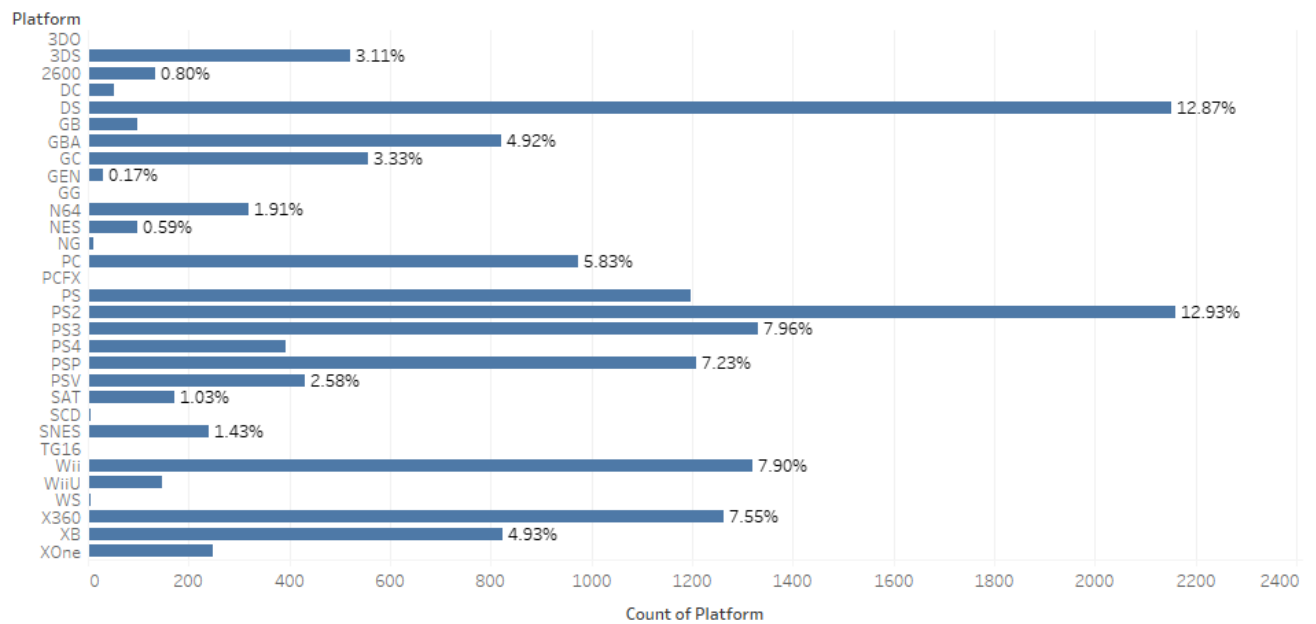


Diagram 7.1

This bar chart shows the percentage of the number of platforms. In the bar chart the PS2 Platform has the highest percentage which is 12.87% out of the total percentage and followed by the DS Platform.

Total Percentage of Sales by Platforms

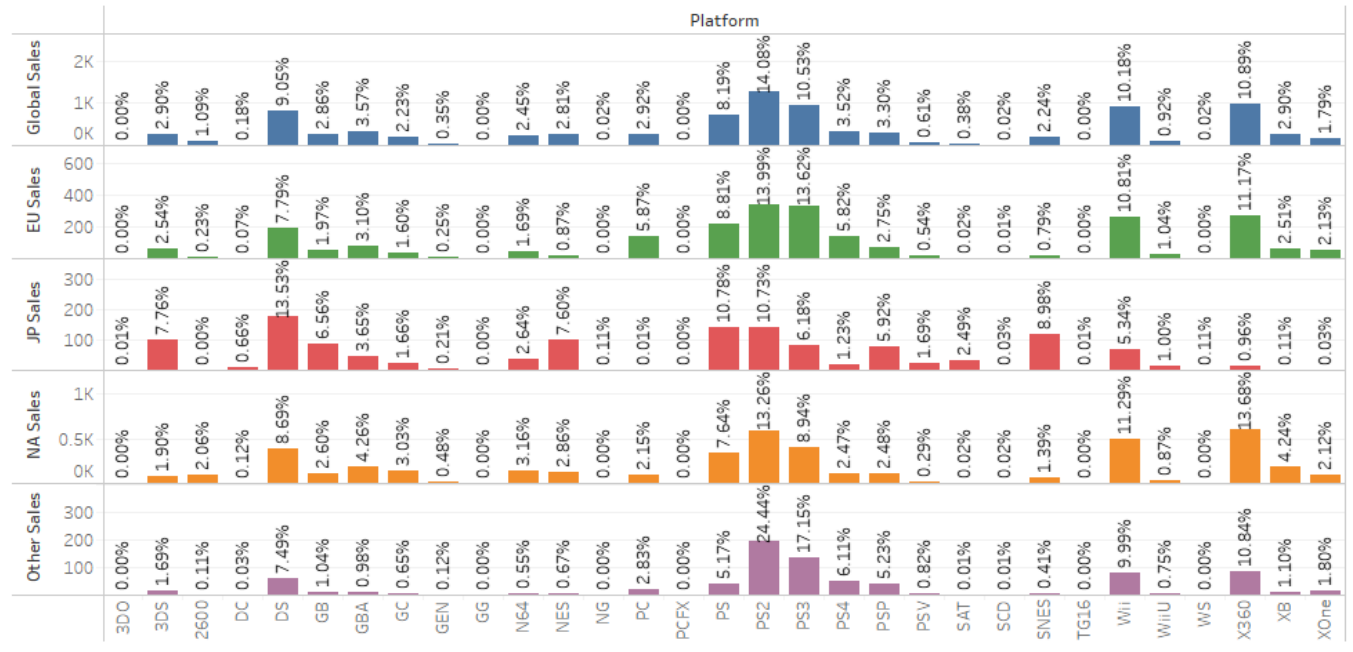


Diagram 7.2

This bar chart shows the percentage of sales by different platforms. From this chart, we can see that in Global sales, PS2 has the highest percentage which is 14.08%. In EU sales, PS2 has the highest percentage which is 13.99%. In JP sales, DS has the highest percentage which is 13.53%. In NA sales, X360 has the highest percentage which is 13.68%. In Other sales, PS2 has the highest percentage which is 24.44%.

### Total Percentage of Count of Publisher

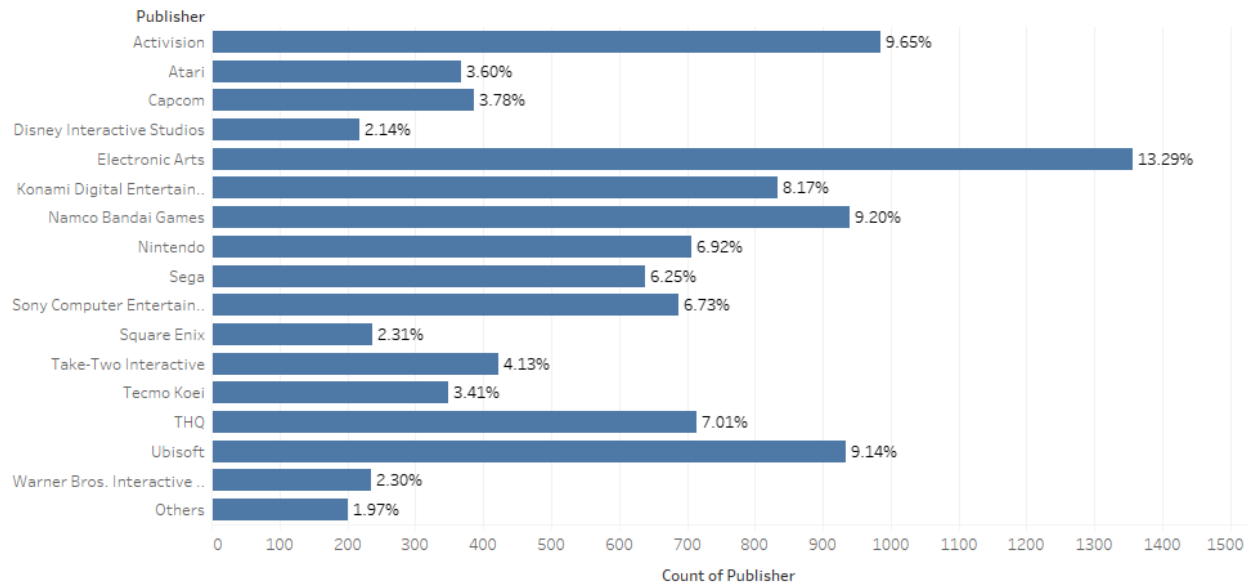


Diagram 8.1

This bar chart shows the percentage of the number of publishers. In the bar chart, Electronic Arts has the highest percentage which is 13.29% out of the total percentage among the publishers. In this chart the publishers who have publish less than 200 games will be combined in others categories.

Total Percentage of Sales by Publishers

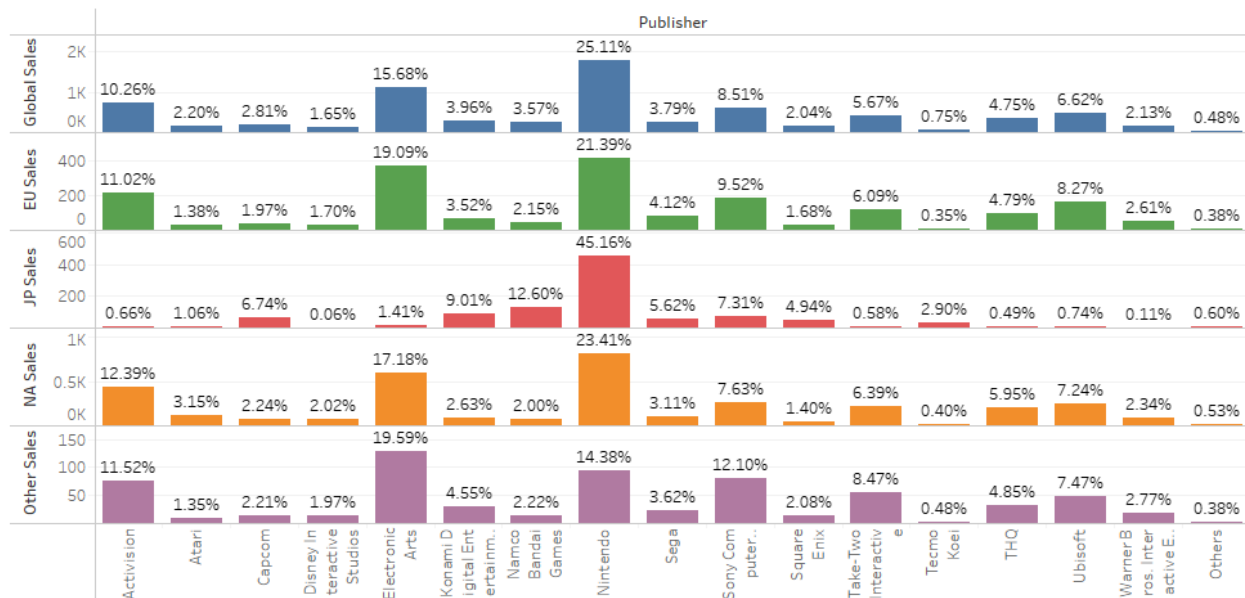


Diagram 8.2

This bar chart shows the percentage of sales by different publishers. In this chart the publishers who have published less than 200 games will be combined in other categories. From this chart, we can see that in Global sales, Nintendo has the highest percentage which is 25.11%. In EU sales, Nintendo has the highest percentage which is 21.39%. In JP sales, Nintendo has the highest percentage which is 45.16%. In NA sales, Nintendo has the highest percentage which is 23.41%. In Other sales, Electronic Arts has the highest percentage which is 19.59%.



Number of Global Sales for each Publisher,  
with diverging colors to show  
the Average Critic Score for each Publisher

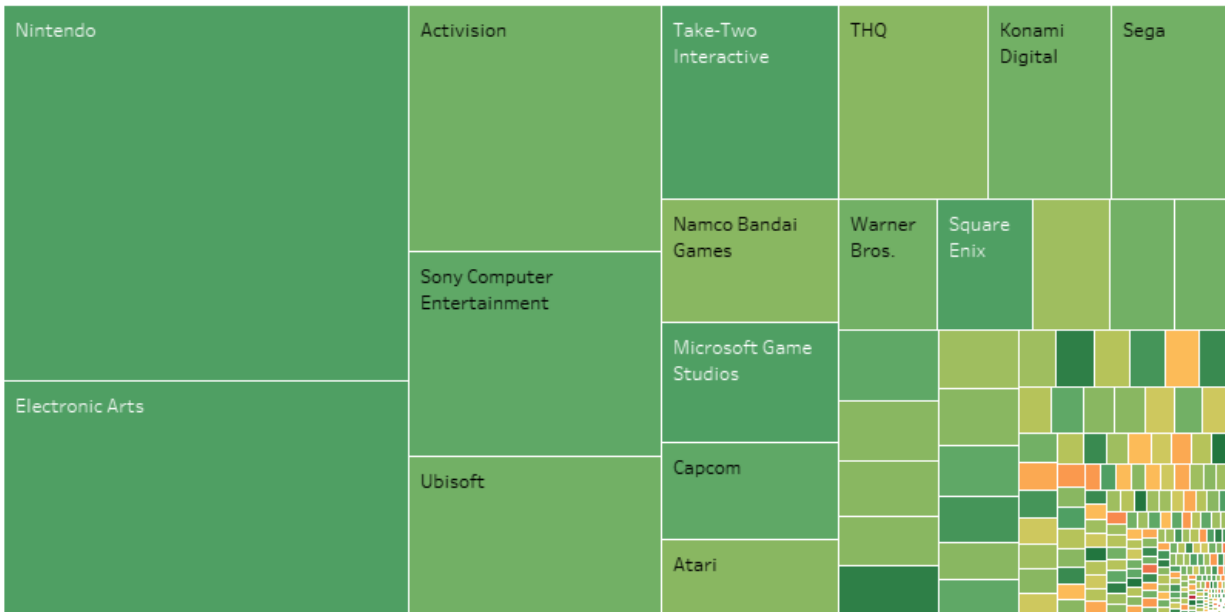


Diagram 9.1

The treemap shows the number of global sales for each publisher, bigger tiles indicate more global sales. The color of the tile shows the average critic score of the publisher, with green indicating a higher score and red indicating a lower score. This shows that Nintendo is the publisher that made the most sales and has an average critic score of 75.53

Number of Global Sales  
for each Game Genre  
based on the Year of Release

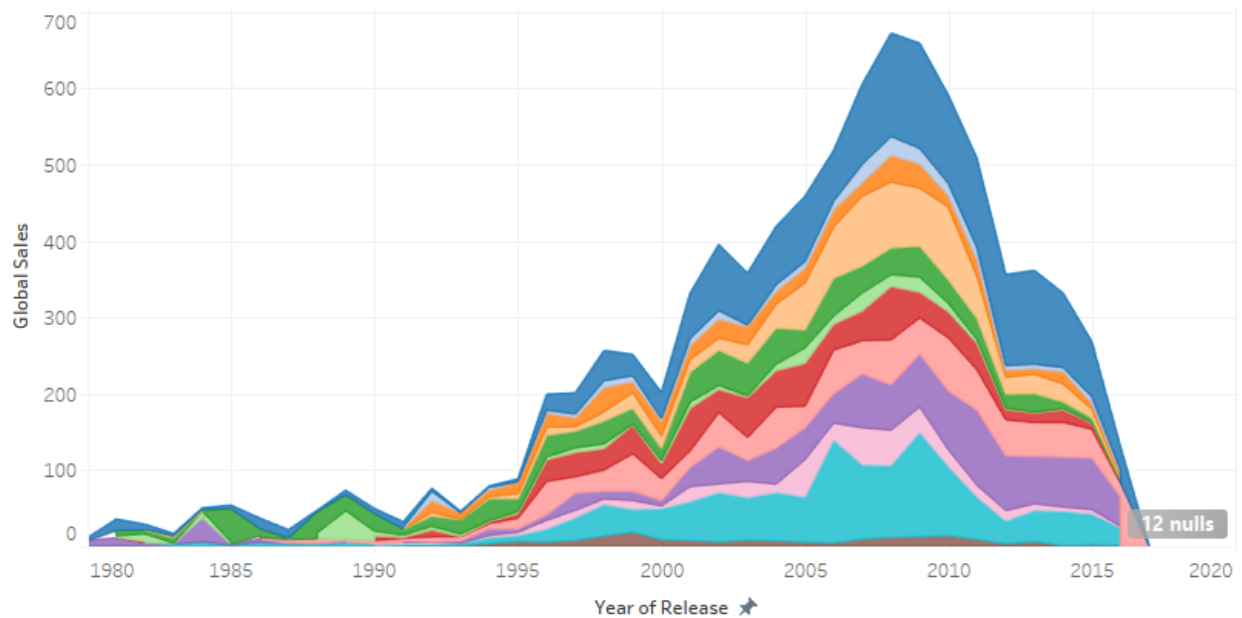


Diagram 10.1

This area chart shows the global sales of each game genre based on the year of release of the game. The genre is differentiated by colors, and the area of each color indicates the sales for that genre. This shows that there is a peak in global sales in the year 2008, where action games have more sales than other game genres.

Number of Sales in each Continent per Genre

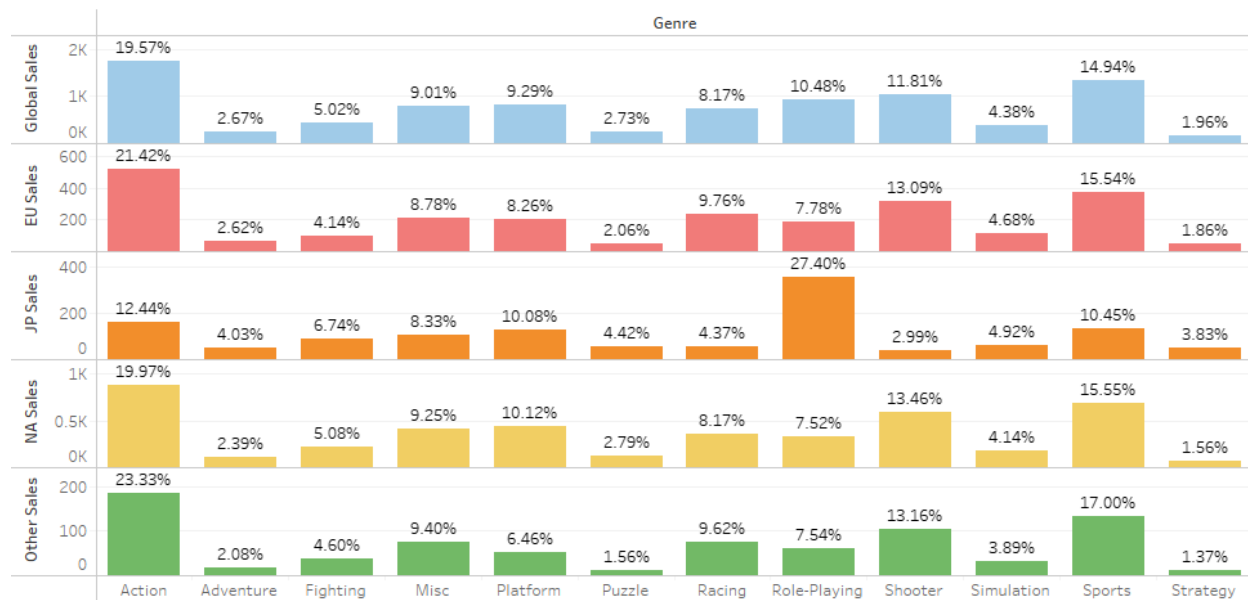
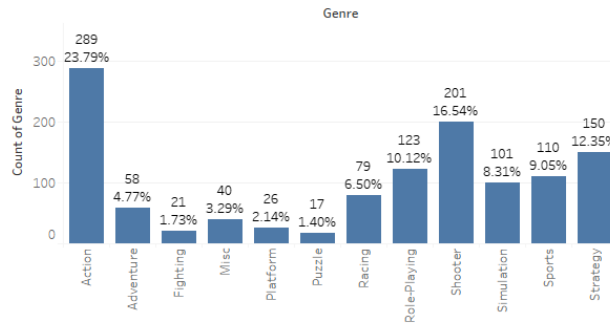


Diagram 11.1

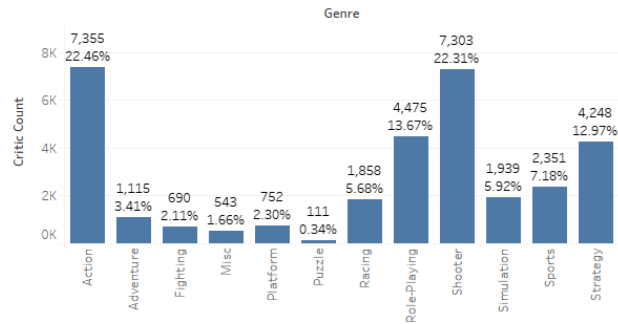
Each bar chart shows the number of sales in different continents based on the genre of the game. This shows which game is more popular (more sales) in each continent.

## 2. Dashboards

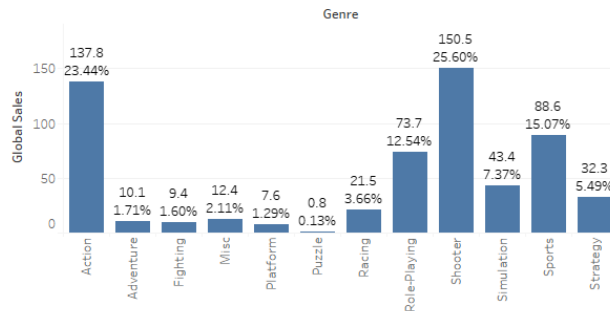
Total Percentage of Count of Genre



Total Percentage of Critic Count by Genre



Total Percentage of Global Sales by Genre



Total Percentage of Critic Score by Genre

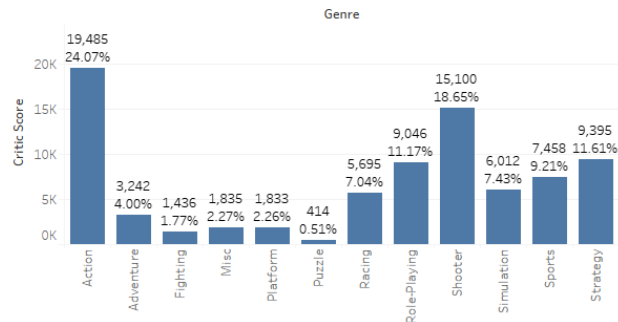
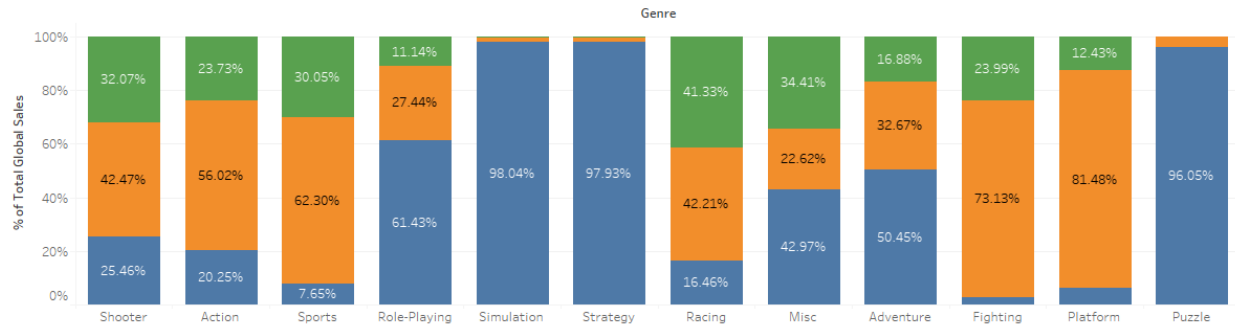


Diagram 12.1

This dashboard shows four of the bar charts that are based on the genre. From this dashboard, we can see that the action genre reaches the highest percentage among all the platforms on 3 out of 4 charts.

**Stacked Bar Chart - Total Percentage of Global Sales by Each Genre within XOne,PS4,PC**



**Side-by-Side Bar Chart - Total Percentage of Global Sales by Each Genre within XOne,PS4,PC**

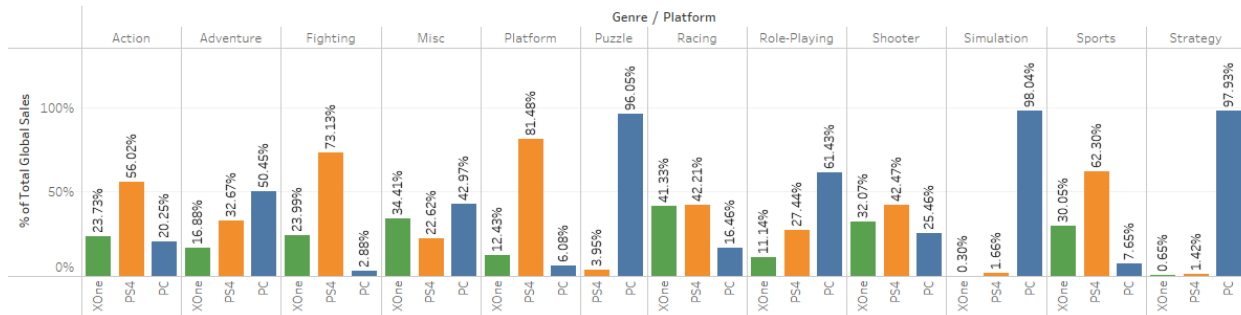
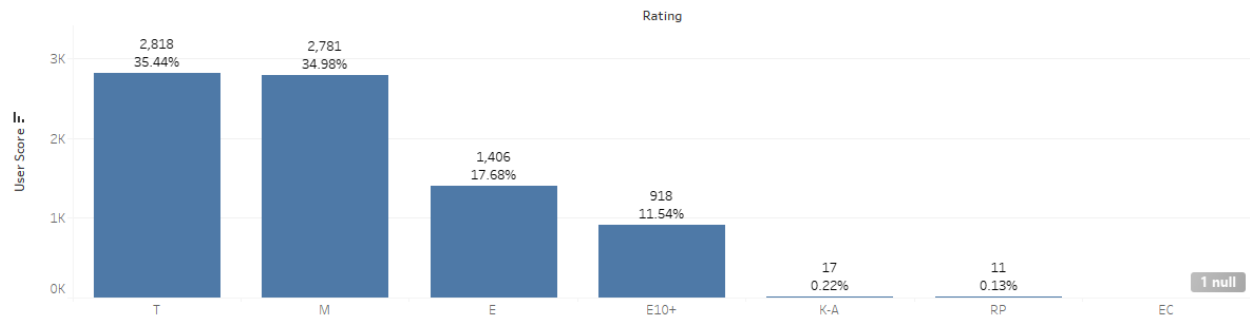


Diagram 13.1

This dashboard shows the two charts that display the same information in a different visual way. Both charts show the percentage of global sales of each genre among PC, PS4 and Xbox One.

Total Percentage of User Score by Rating



Total Percentage of Global Sales by Rating

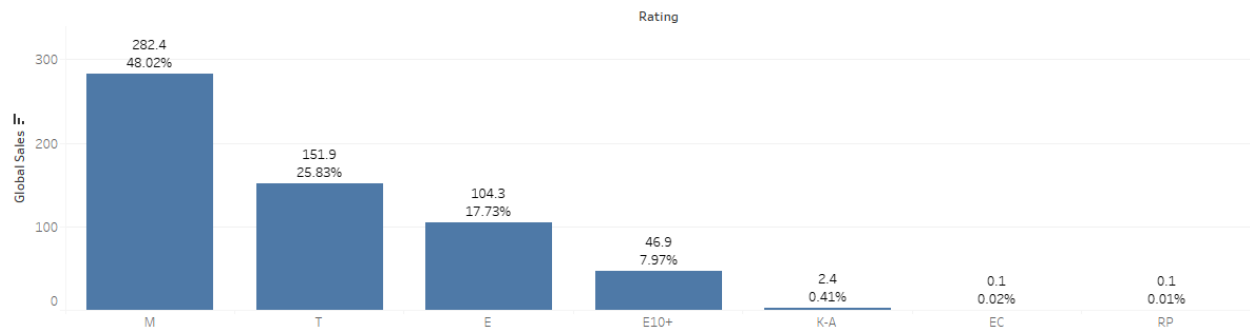


Diagram 14.1

This dashboard shows two of the bar charts that are based on rating. From the dashboard, we can see that it may not need to be based on the user score to achieve the highest global sales. This is because from the data, we have gathered the fact that the highest user score rating is T with 35.44%, while the highest global sales rating is M with 48.02%.