

IBM INTERNSHIP DOCUMENTATION

PROJECT TITLE:

**UNCOVERING THE GAMING INDUSTRIES HIDDEN GEMS: A
COMPREHENSIVE ANALYSIS OF VIDEO GAME SALES**

DONE BY

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INTRODUCTION

- In the fast-evolving landscape of entertainment, the gaming industry stands out as a dynamic and multifaceted realm that captivates millions across the globe. The project "Uncovering The Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales" embarks on a journey to unravel the intricate layers of this vibrant domain through a rigorous data-driven approach.
- With the aid of advanced visualization and analytical tools provided by Tableau, this project delves into the depths of video game sales data, seeking to unearth the lesser-known yet impactful facets that often remain concealed amidst the industry's prominent giants. By meticulously dissecting patterns, trends, and correlations within the dataset, the project aims to identify hidden gems in games that have quietly garnered substantial sales figures without occupying the limelight.
- Through a meticulous exploration of global sales figures, market trends, and genre preferences, the project seeks to shed light on the underappreciated successes that contribute significantly to the industry's overall landscape. The comprehensive analysis is designed to not only highlight the unsung heroes but also to provide valuable insights for industry stakeholders, enthusiasts, and analysts alike.
- As the gaming world continues to expand, this project aspires to celebrate diversity, innovation, and the unexpected triumphs that collectively shape the gaming industry. By employing Tableau's powerful tools, the project aspires to uncover valuable narratives that enhance our understanding of this dynamic sector, while also offering a testament to the potential of data analysis in revealing hidden treasures within complex datasets.
- In this analysis we are going to analyse the video game sales between 1980 and 2015 years.
- The Ideal aim of this analysis is to find the video games sales patterns.

VISUALIZATION

1.Introduction to Data Visualization:

- Data visualization involves presenting information and data in a graphical format.
- Utilizing visual elements like charts, graphs, and maps, data visualization tools offer an accessible way to interpret trends, anomalies, and patterns within data.
- It serves as a valuable tool for presenting complex data to non-technical audiences in a clear and comprehensible manner.

2.Importance in Data Analysis:

- In the era of Big Data, data visualization tools and technologies are indispensable for analyzing vast datasets and facilitating data-driven decision-making.
- These tools help distill massive amounts of information into meaningful insights.

3.Variety in Graphs and Parameters:

- The project employs diverse graphs plotted with various parameters tailored to distinct contexts.
- These graphical representations enhance understanding and provide a visual perspective of the data's narrative.

4.Visualization in Action:

- The project showcases a compilation of visualizations, stories, and dashboards.
- These components synergistically explain and present the data analysis process and its outcomes.
- For a comprehensive overview, the provided demonstration link offers detailed insights into each plot, story, and dashboard.

Demonstration Link:

<https://drive.google.com/file/d/1KHUgd86jxceRDw1x39NdA0lYP7Ay08W/view>

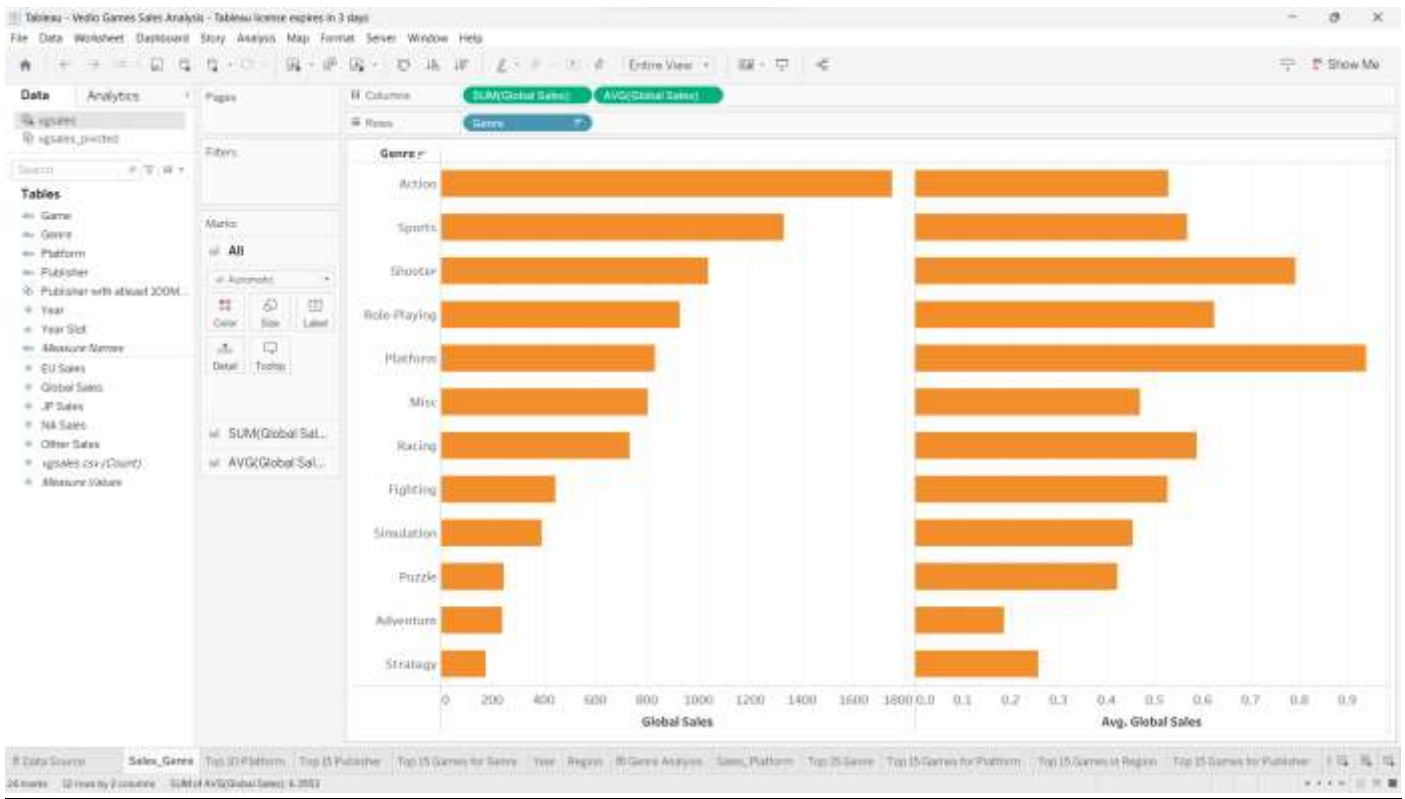
DATASET

- Dataset plays a major role in doing Exploratory data analytics.
- To have a better result in your analytics, we should have the dataset to be cleaned. Cleaned in the sense, the data should not contain any noises in it.
- I have Took the dataset from Kaggle Website.

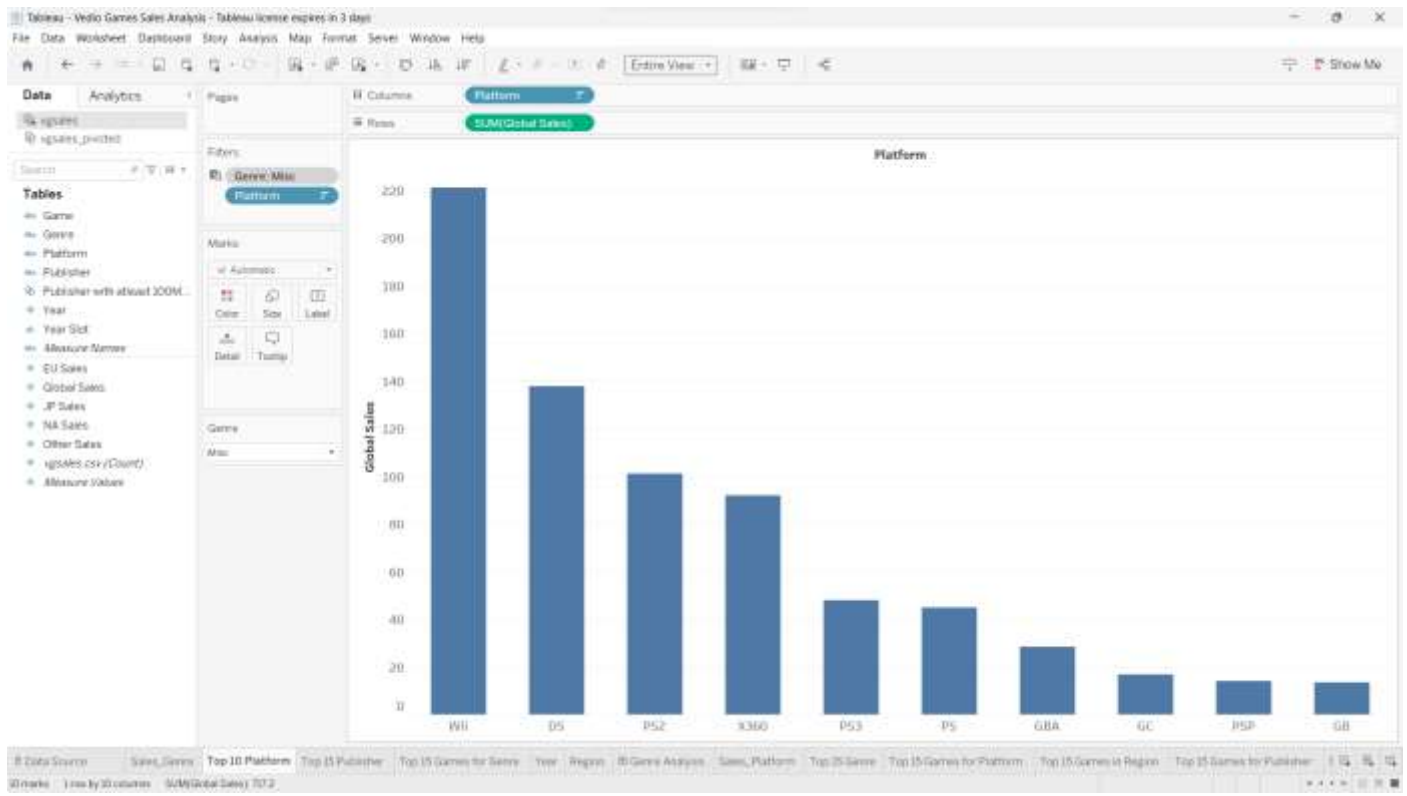
LINK:

<https://www.kaggle.com/datasets/gregorut/videogamesales>

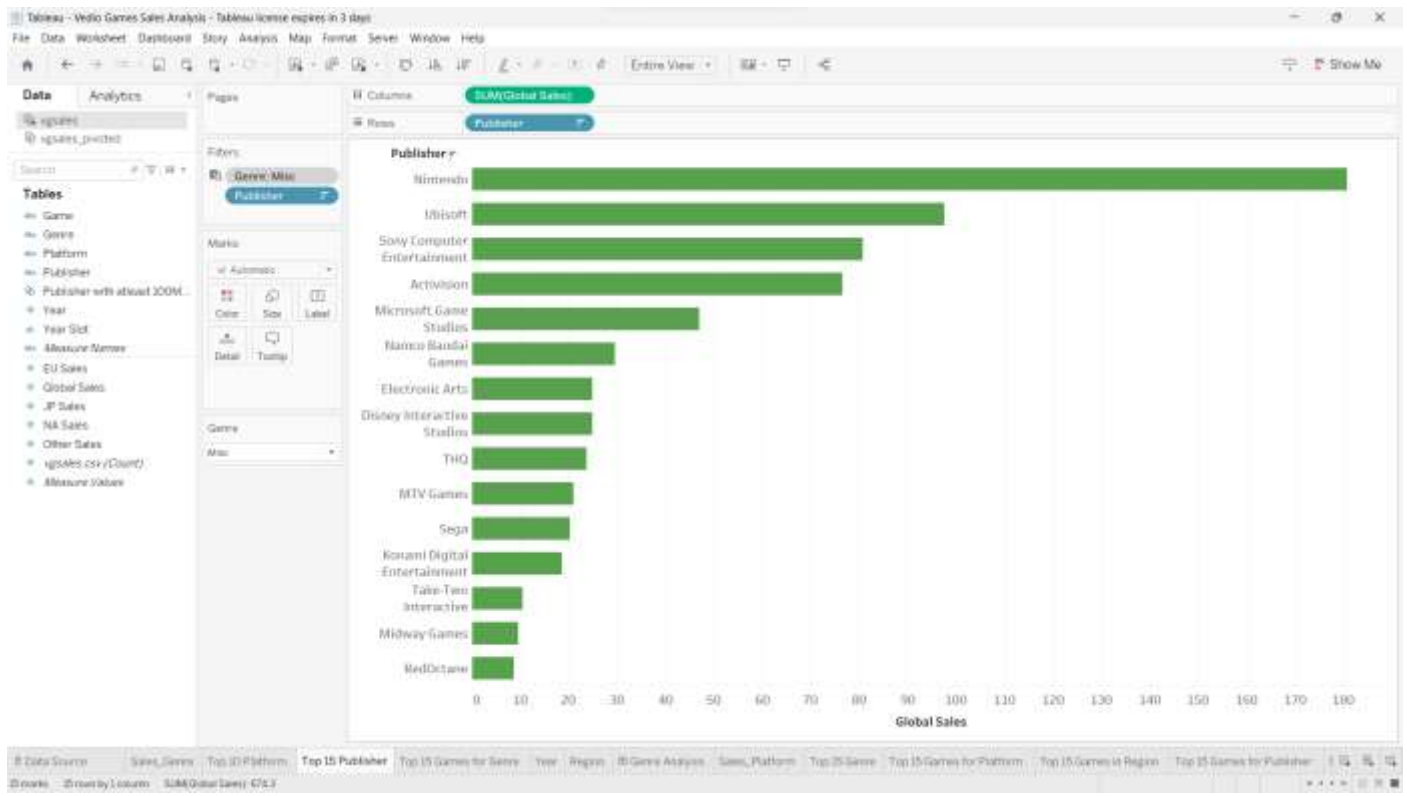
GRAPHS AND PLOTS



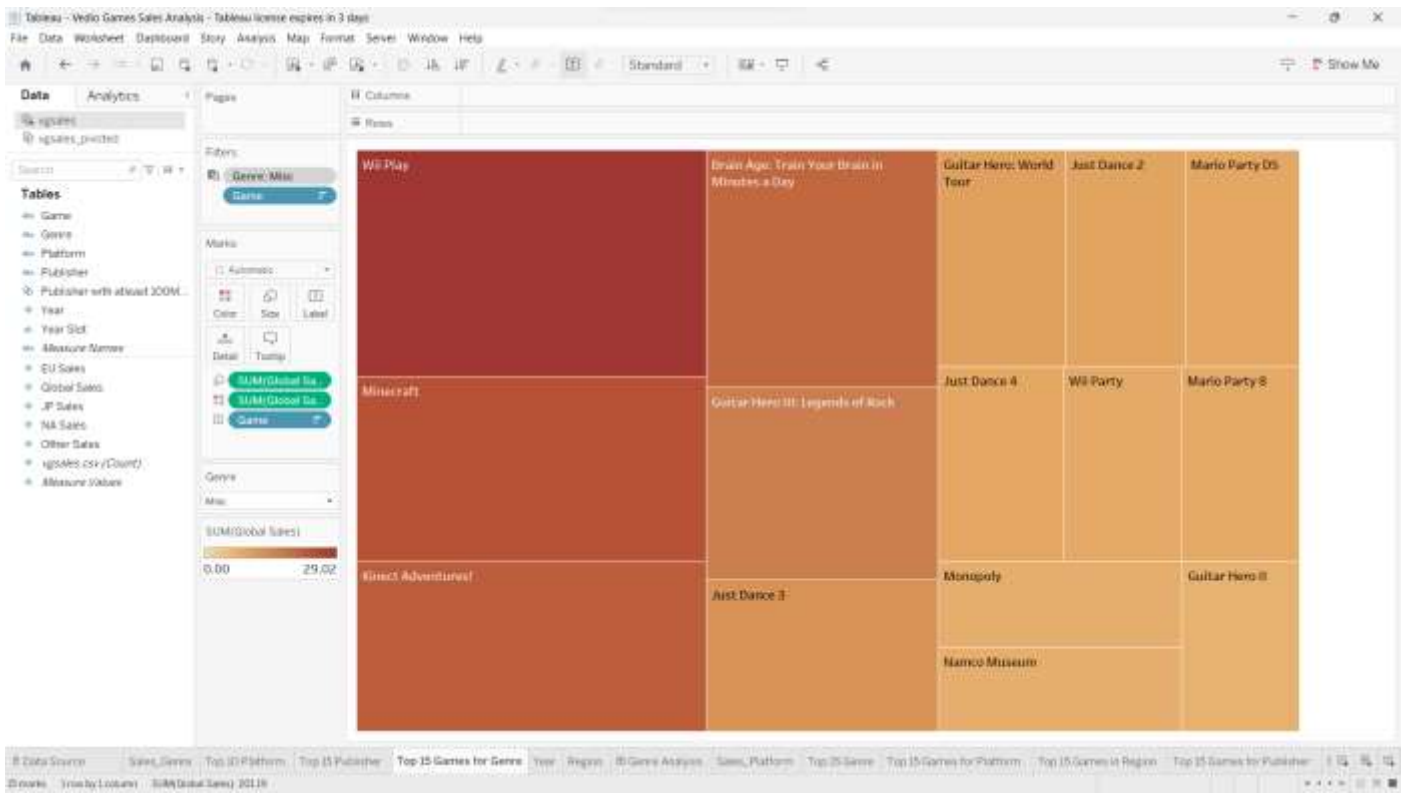
- Sum of global sales for each genre using a bar plot.
- Average of global sales for each genre using a bar plot.
- To find the average and sum of each genre in order to identify the most sold games within a genre.



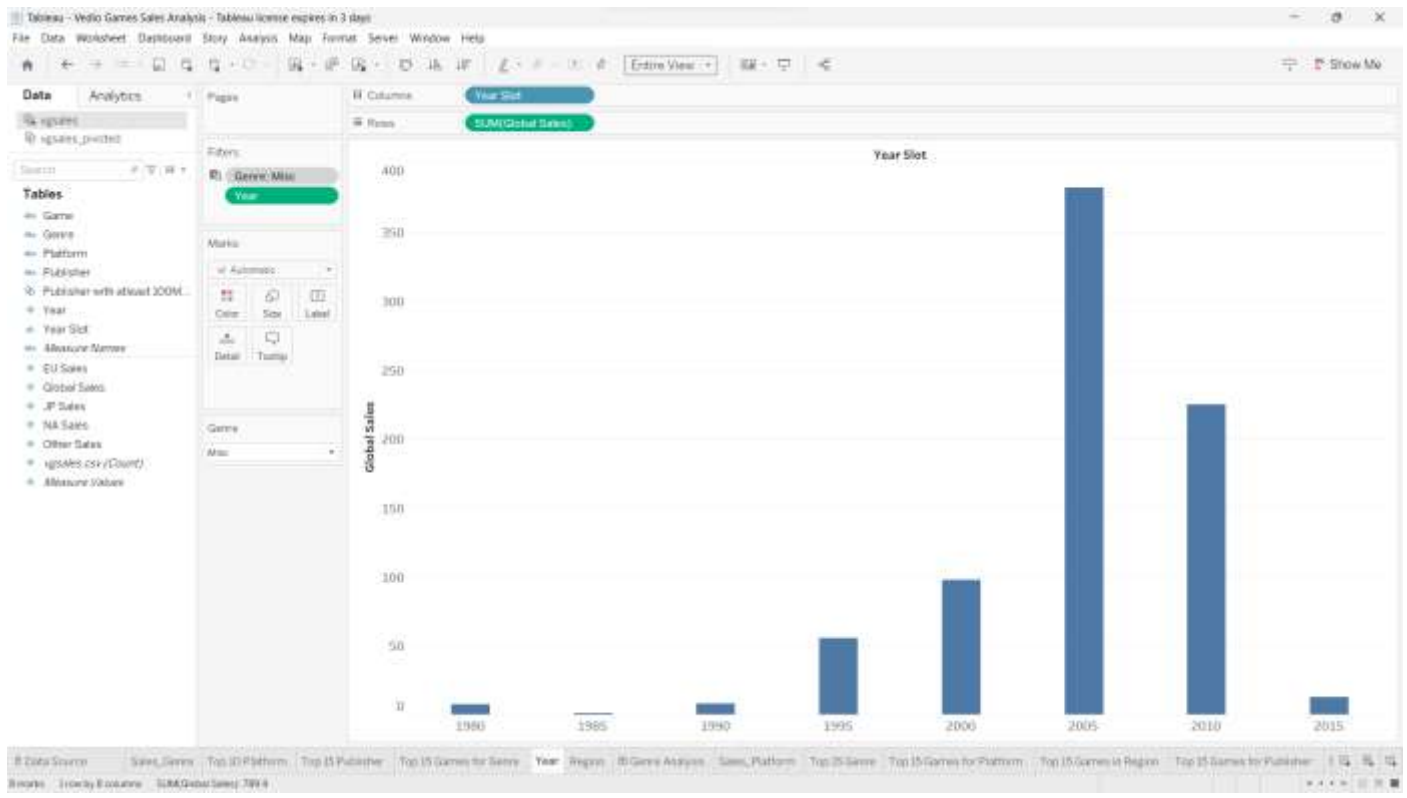
- Sum of Global Sales for each Platform. The context is filtered on Genre, which includes Misc.
- The view is filtered on Platform, showing 10 out of 31 members, using a bar plot.
- This is done to determine which platform has the highest number of best-selling games.



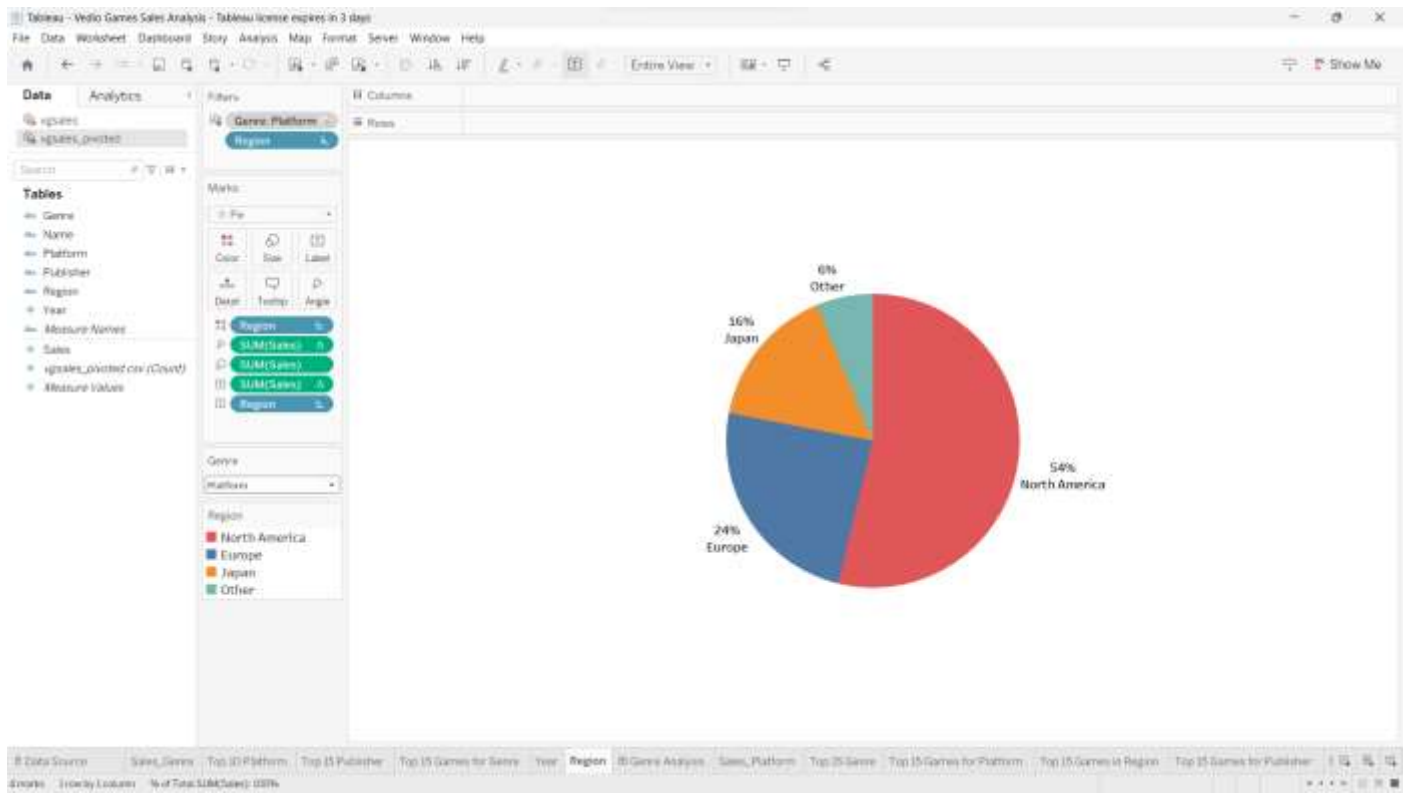
- Sum of global sales for each publisher. The context is filtered on genre, which includes misc.
- The view is filtered on publisher, displaying 15 out of 578 members, using a bar plot.
- This is done to determine which publisher has released the highest number of best-selling games.



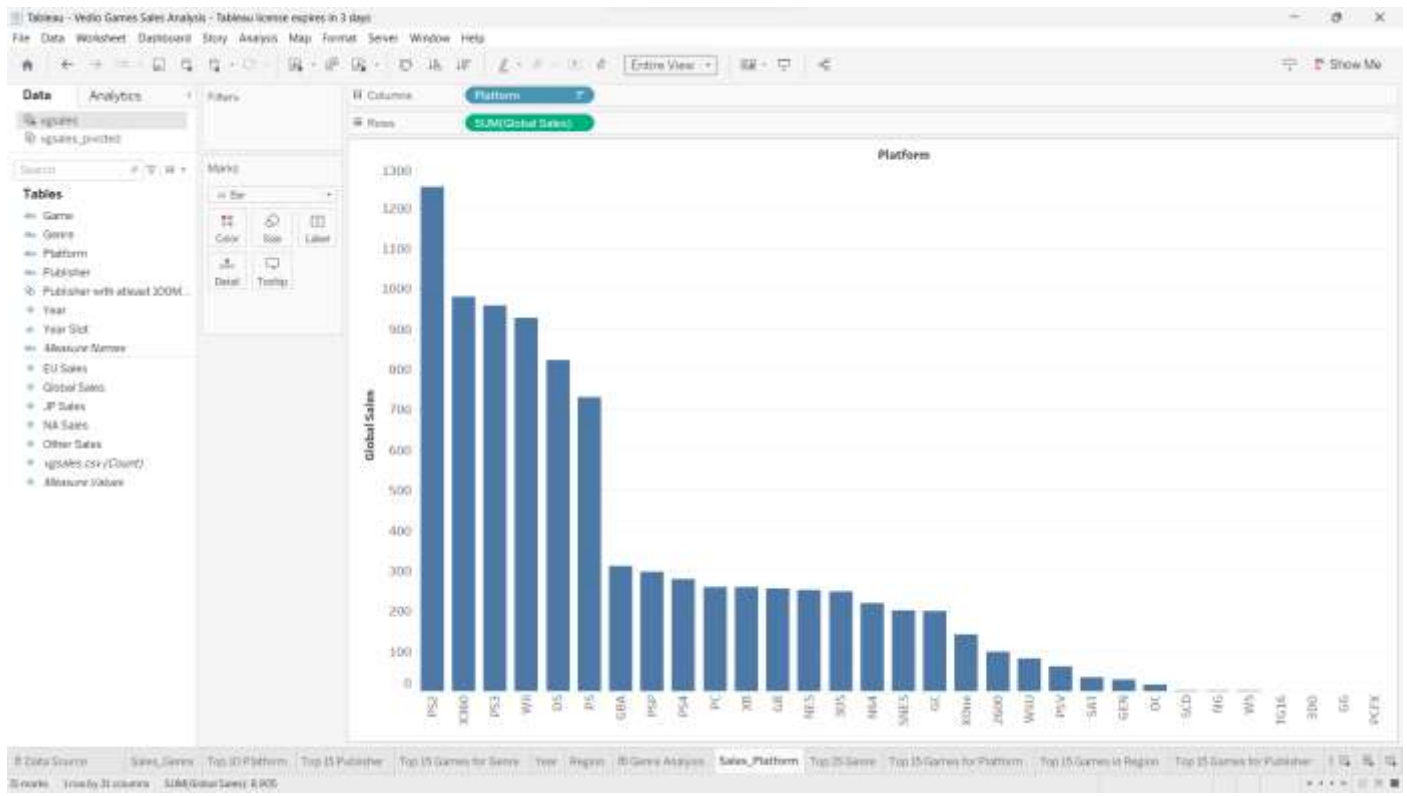
- Game color represents the sum of global sales, while size represents the sum of global sales. The marks are labeled by game.
- The context is filtered on genre, which includes misc. The view is filtered on game, displaying 15 out of 11,441 members.
- This is done to identify the top-selling game within the genre.



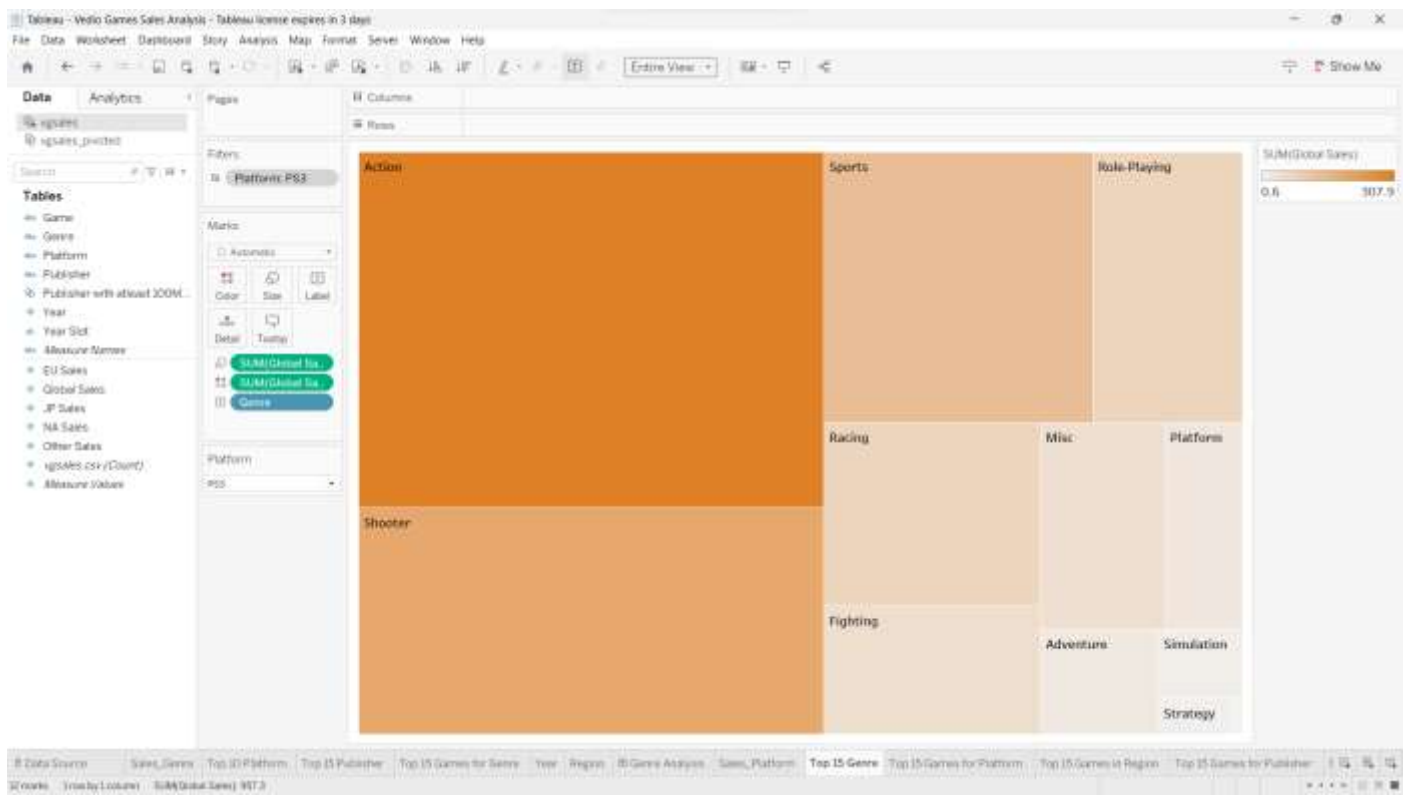
- Sum of global sales for each year slot. The context is filtered on Genre, which includes Misc.
- The data is filtered on Year, retaining non-null values only.
- This is done to determine the year in which the highest number of games were sold.



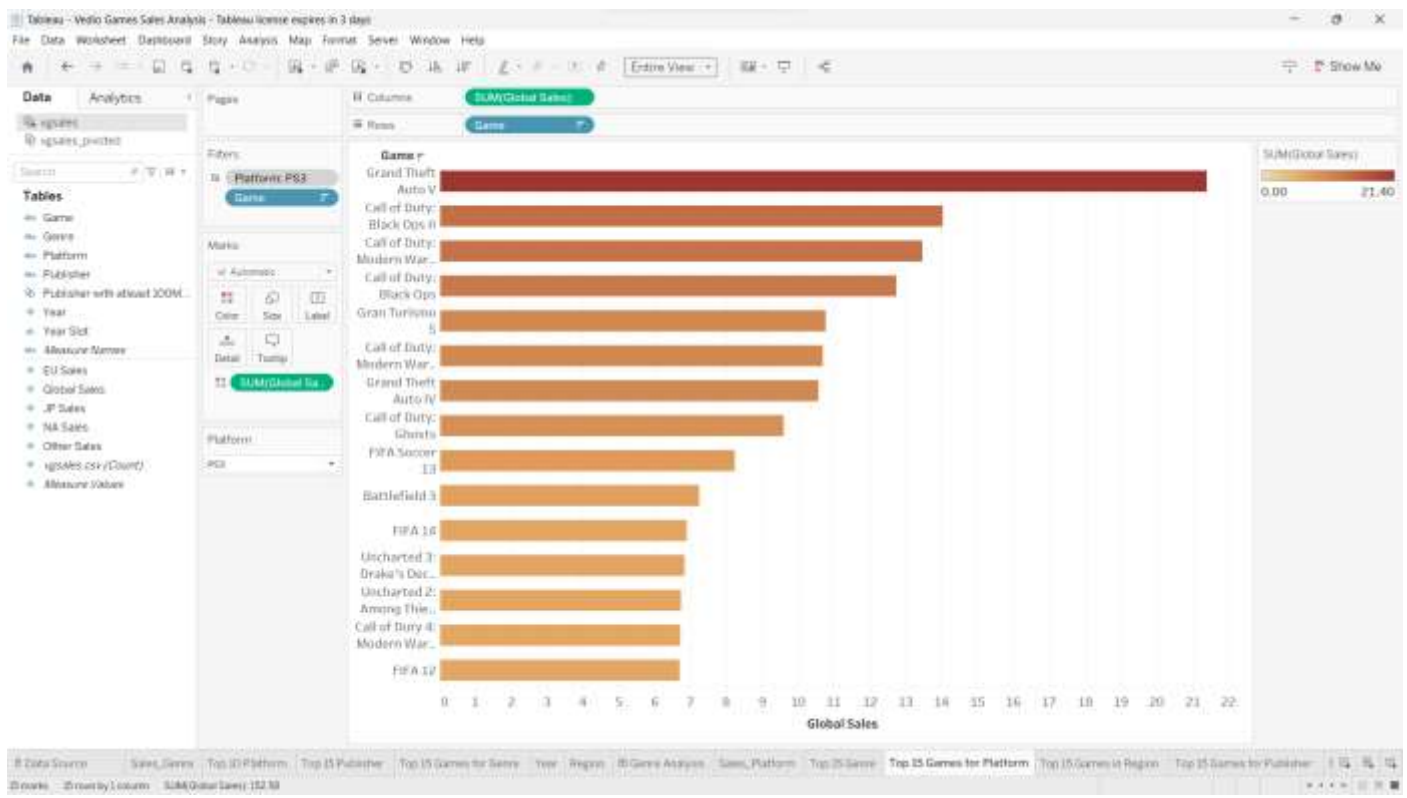
- % of Total Sales and Region Color illustrate details about Region Size. The marks are labeled by % of Total Sales and Region.
- The context is filtered on Genre (vgsales), which includes Misc. The view is filtered on Region, retaining Europe, Japan, North America, and Other.
- This is done to identify the region with the highest customer base or where the most games were sold.



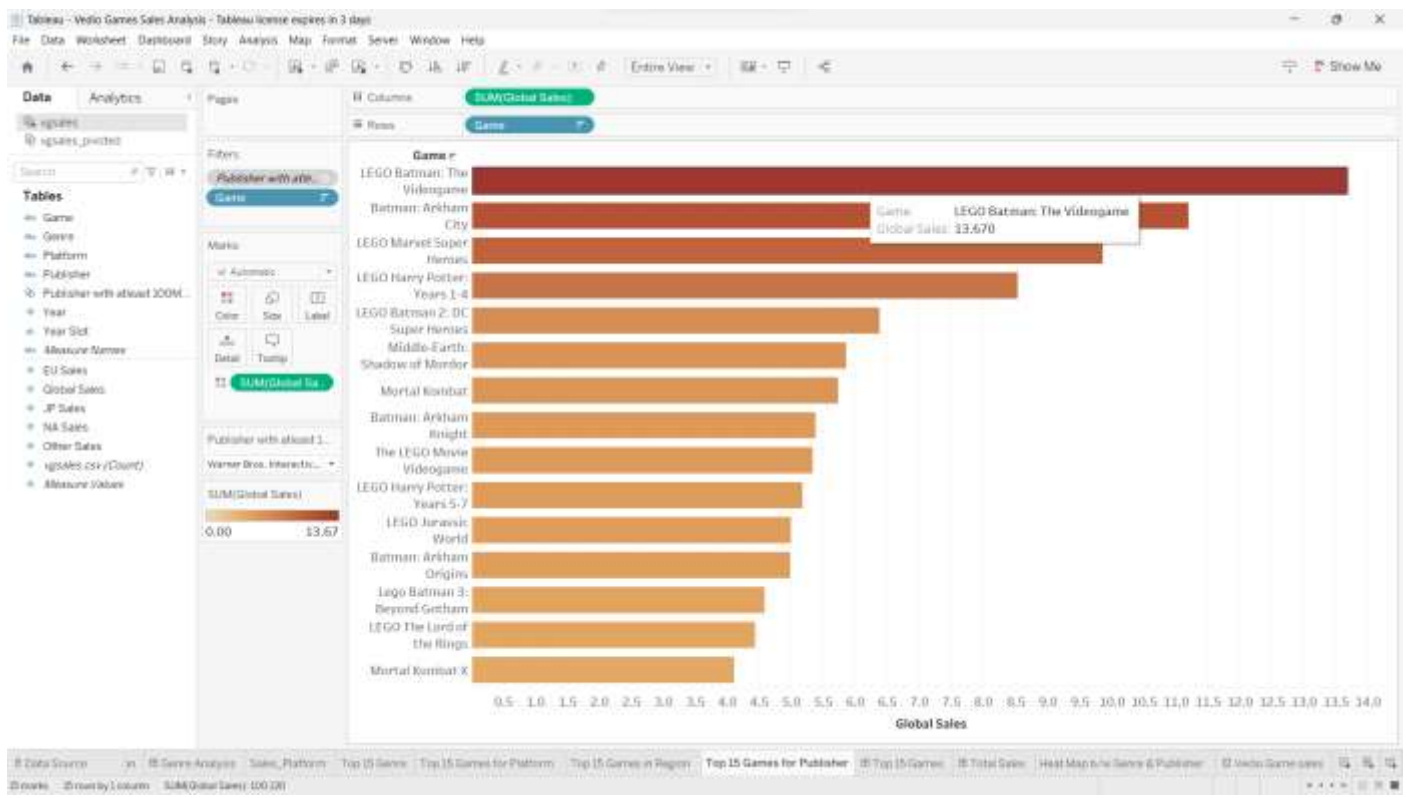
- Generate a bar plot depicting the sum of global sales for each platform.
- This is done to determine which platform has the highest sales.



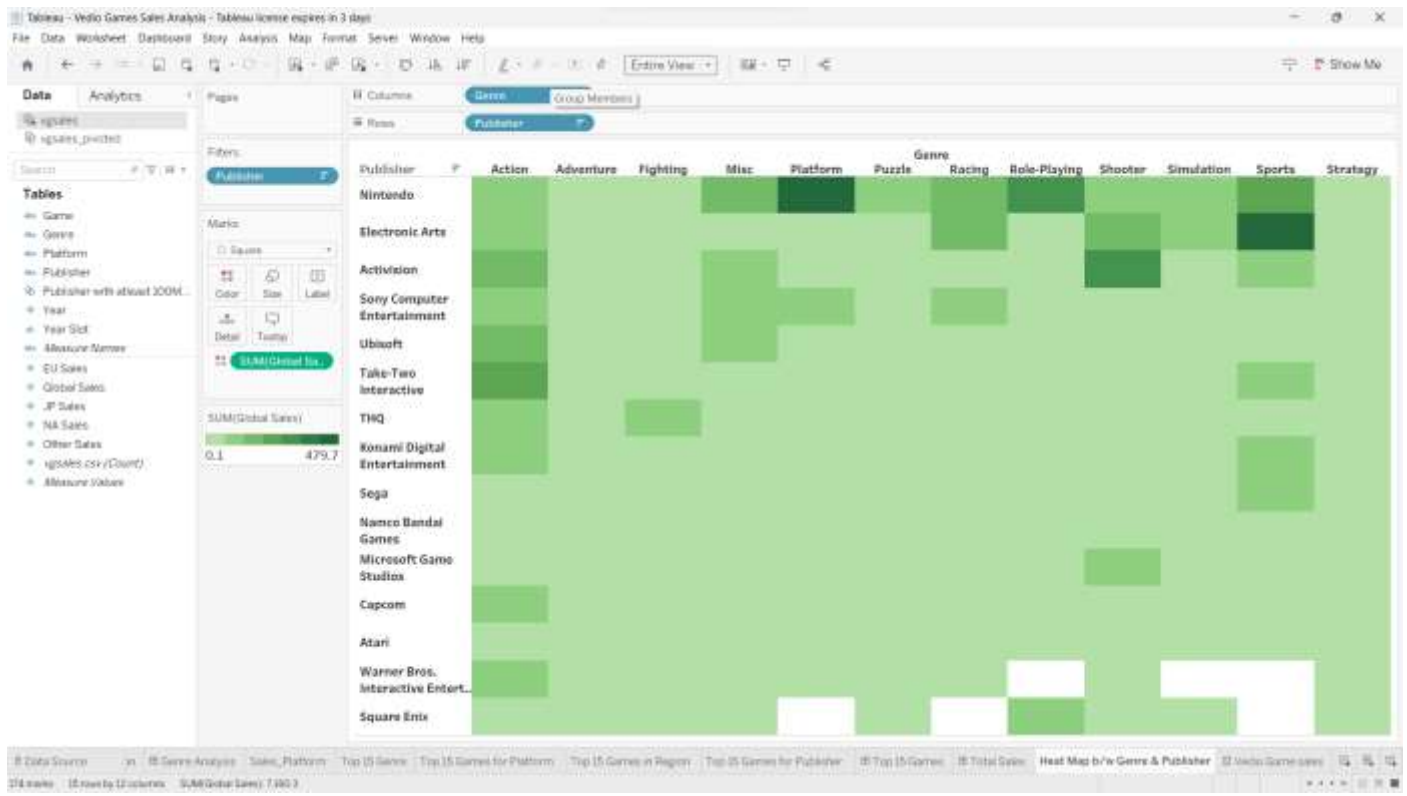
- Genre color represents the sum of global sales, while size represents the sum of global sales. The marks are labeled by genre.
- The context is filtered on the platform, which is limited to PS3.
- This analysis aims to identify the top 15 genres based on the PS3 platform.



- Sum of global sales for each game. Color represents the sum of global sales.
- The context is filtered on the platform, which includes PS3. The view is filtered on games, displaying 15 out of 11,441 members.
- The goal is to identify the top 15 games for the platform.



- Sum of global sales for each game. Color represents the sum of global sales.
- The context is filtered on publishers with at least 100 million global sales, retaining 1 member. The view is filtered on games, displaying 15 out of 11,441 members.
- The goal is to identify the top 15 games for the specified publisher.



- Sum of global sales (colour) broken down by Genre versus Publisher. The view is filtered on Publisher, displaying 15 out of 578 members.
- The objective is to uncover the heatmap correlation between genres and publishers.

DASHBOARD

A dashboard in Tableau is a versatile tool that facilitates the simultaneous comparison of various data views.

1. Purpose and Usage:

- Dashboards allow users to consolidate multiple visualizations into one display for effective data exploration.
- Instead of navigating to separate worksheets, users can access a collection of views all at once within a dashboard.
- Useful for regularly reviewed sets of views, streamlining analysis routines.

2. Access and Connection:

- Dashboards are accessed from tabs at the bottom of a Tableau workbook, similar to how worksheets are accessed.
- Data in both sheets and dashboards are interconnected. Changes made in one affect the other.
- Modifications to sheets or dashboards reflect the latest available data from the connected data source.

3. Features and Components:

- Dashboards offer various features to create charts and visuals, enhancing data representation.

4. Filters:

- Filter actions allow users to refine displayed data, focusing on specific information.
- Filters assist in presenting valuable insights by trimming down data to user-defined criteria.
- For instance, a filter can be employed to show data related to a particular district rather than an entire state or region.

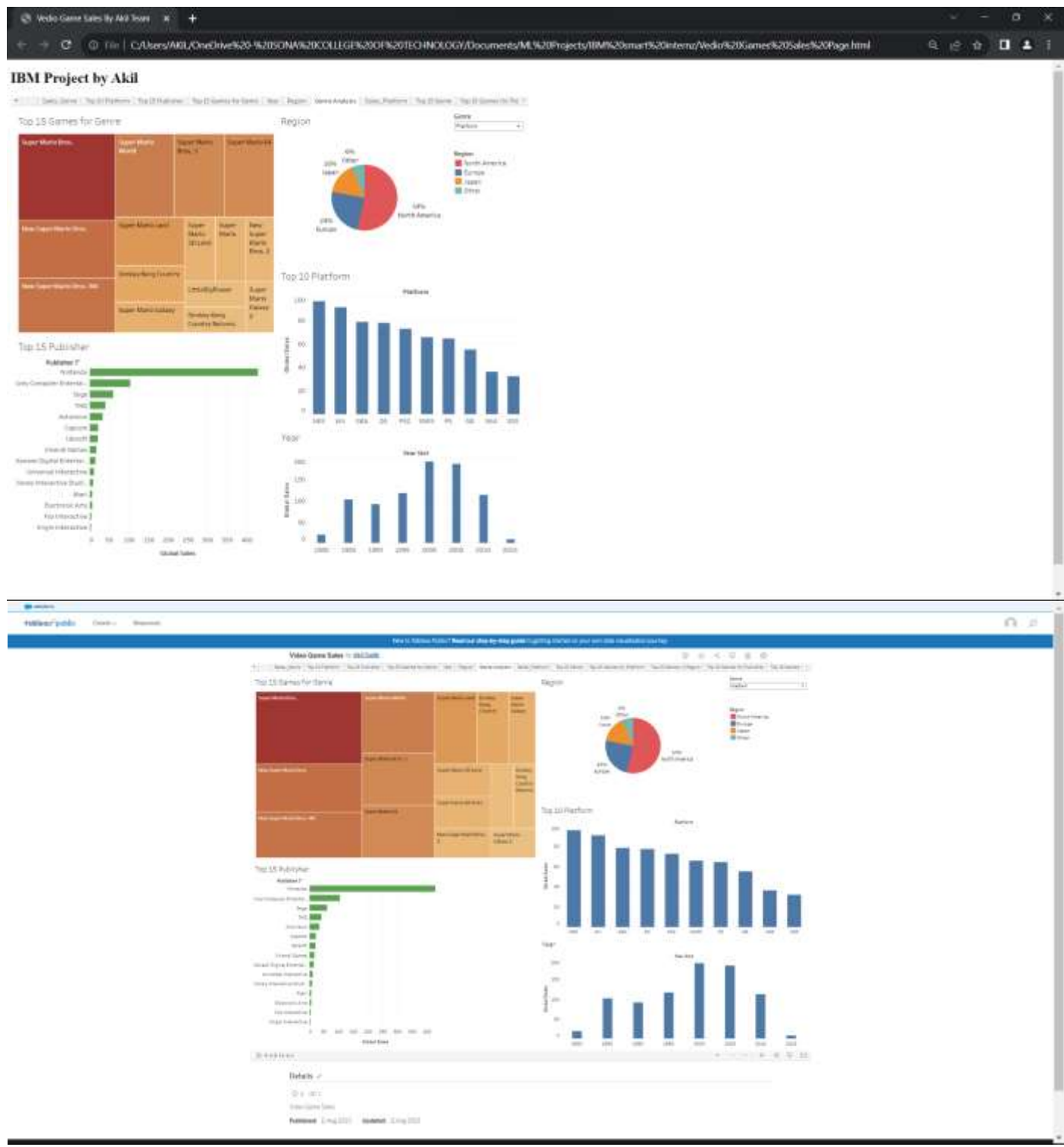
5. Highlight Actions:

- Highlight actions direct attention to specific data points, emphasizing them while dimming others.
- Users can execute highlight actions in different ways, such as using legends, highlighter, or advanced actions.
- This feature is helpful for pinpointing significant data points within a visualization.

6. URL Actions:

- URL actions enable hyperlinks to external web pages or embedded web elements within the dashboard.
- Useful for seamlessly integrating additional information from external sources directly within the dashboard.

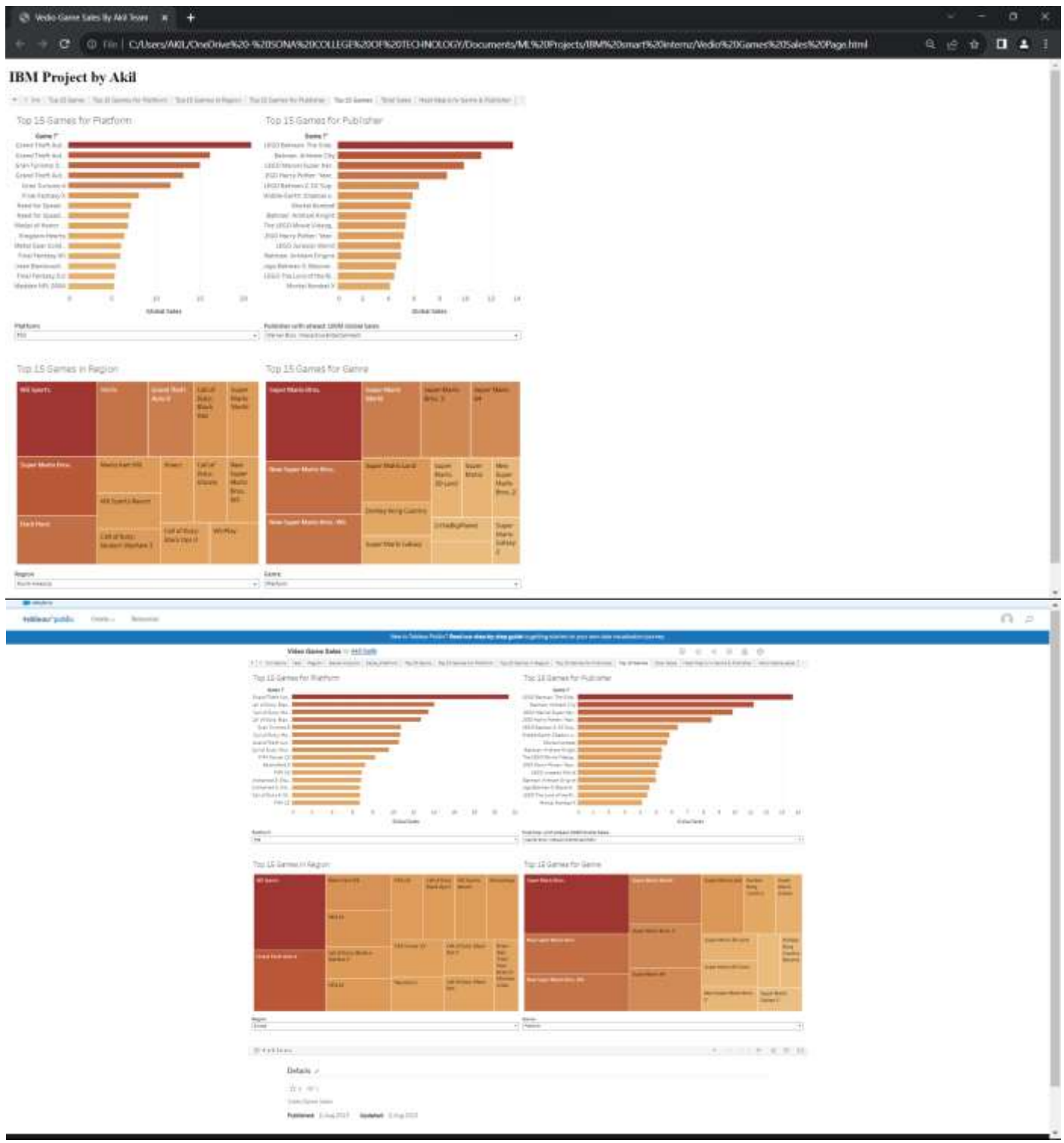
Dashboard 1:



Link:

https://public.tableau.com/app/profile/akil.sadik/viz/VideoGameSales_16917717381130/Top15GamesforPlatform?publish=yes

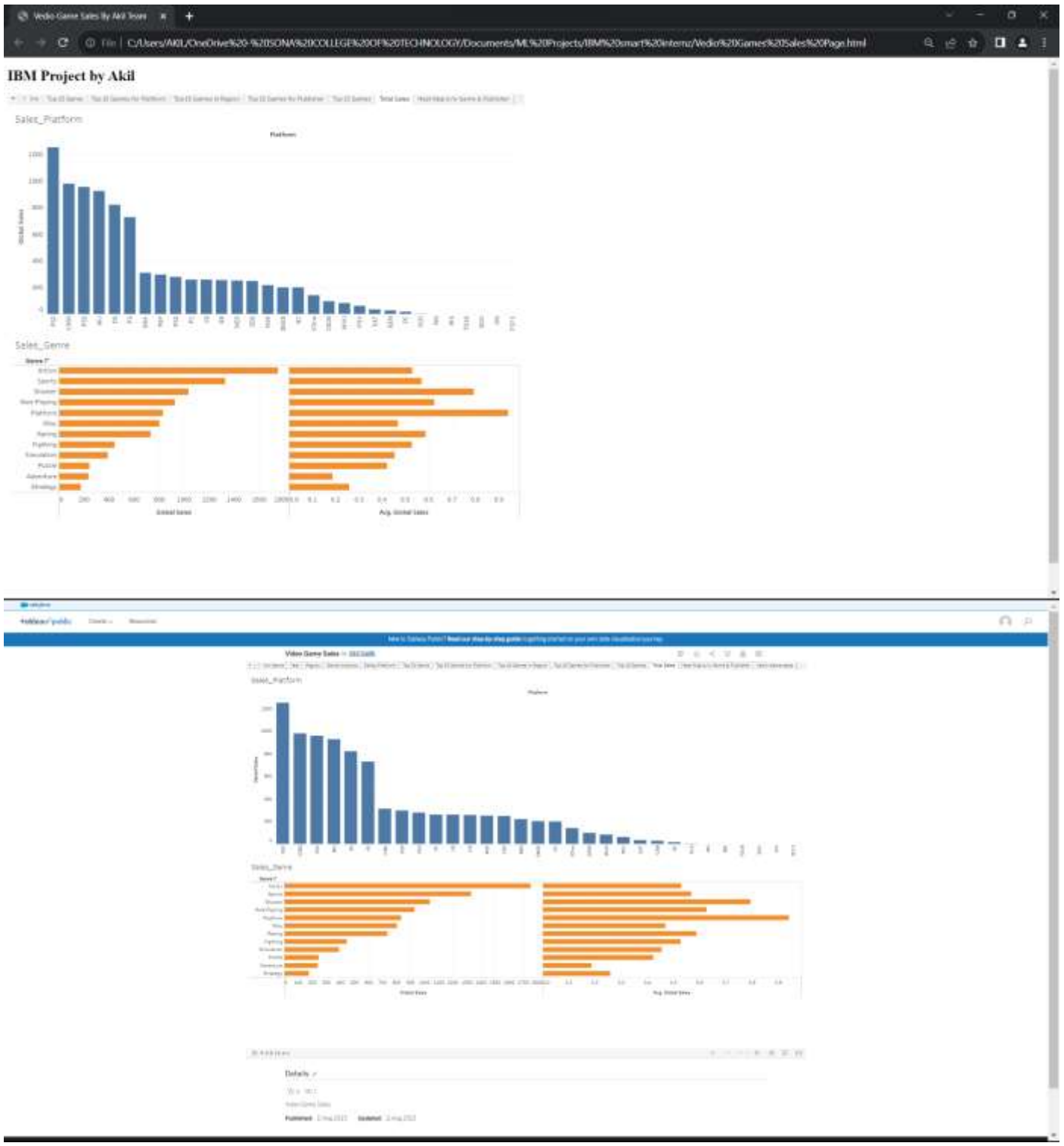
Dashboard 2:



Link:

https://public.tableau.com/app/profile/akil.sadik/viz/VideoGameSales_16917717381130/Top15GamesforPlatform?publish=yes

Dashboard 3:



Link:

https://public.tableau.com/app/profile/akil.sadik/viz/VideoGameSales_16917717381130/Top15GamesforPlatform?publish=yes

STORIES

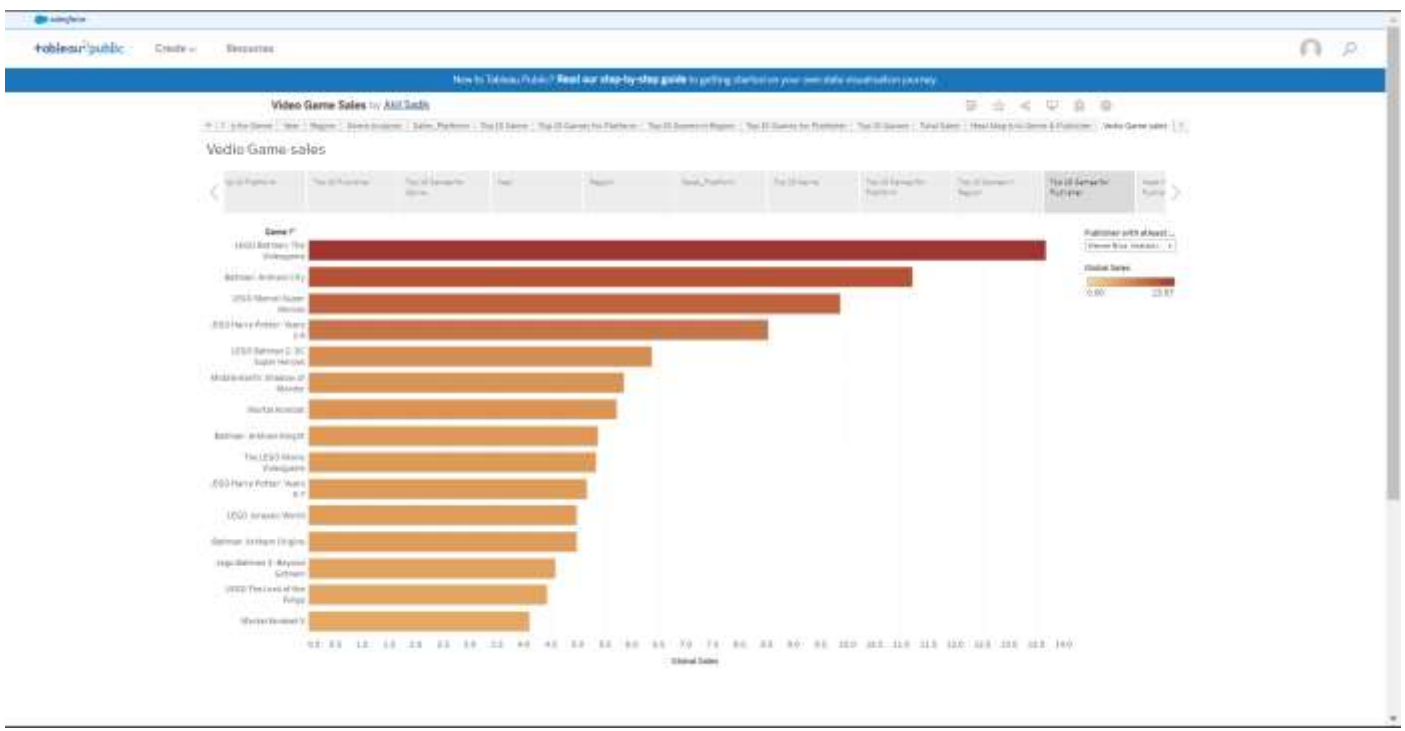
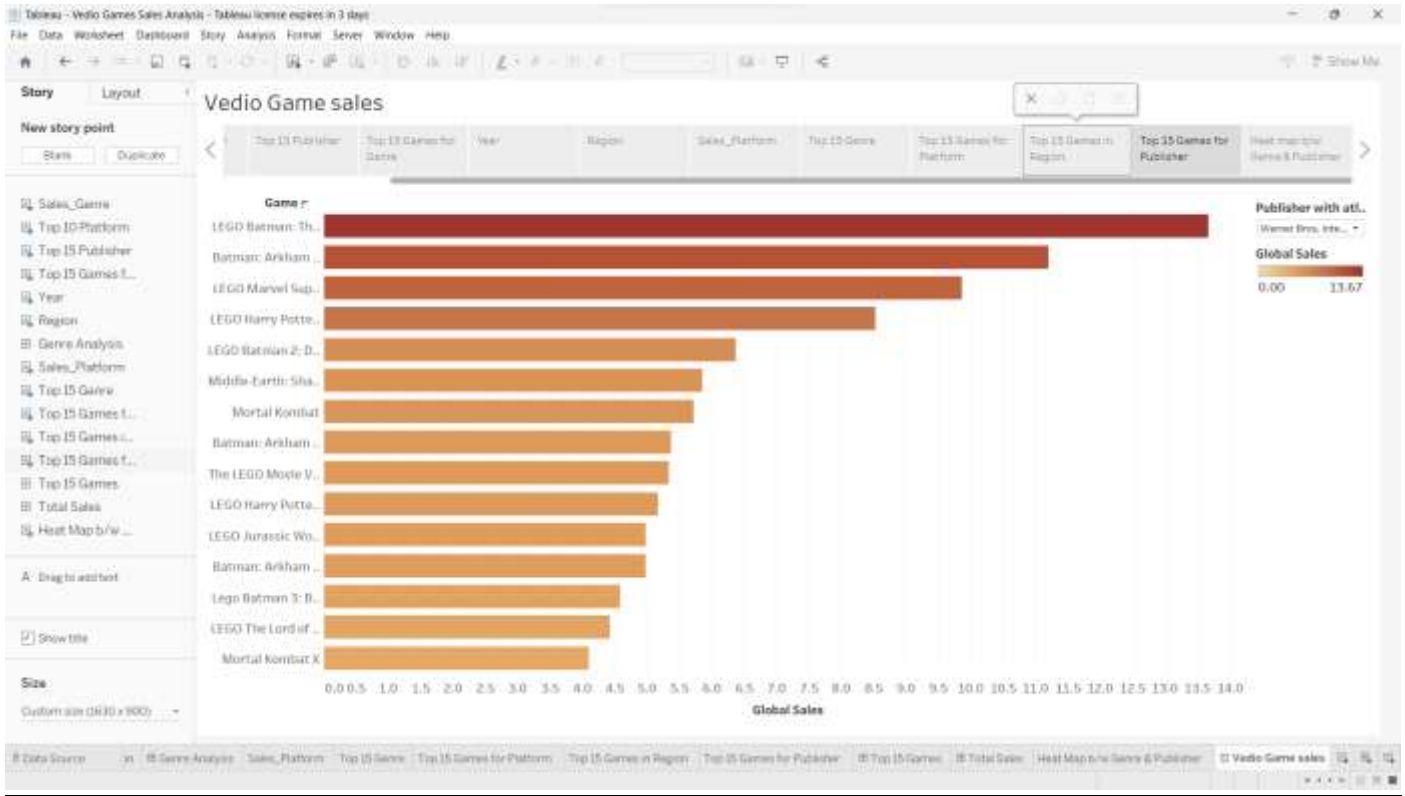
Story:

- A story in Tableau is a cohesive sequence of interactive visualizations and dashboards that are combined to convey a data-driven narrative. It allows users to present and share insights effectively by structuring a series of visual elements that guide viewers through a data analysis process.
- A story typically includes multiple sheets, dashboards, and sometimes text-based explanations to provide context and interpretation. This arrangement aids in highlighting patterns, trends, and relationships in the data.
- The interactive nature of a Tableau story empowers users to engage with the visualizations, enabling a comprehensive understanding of the data story being presented.
- A story is a sheet, so the methods you use to create, name, and manage worksheets and dashboards also apply to stories (for more details, see workbook and sheets).

Tableau Public story link:

https://public.tableau.com/app/profile/akil.sadik/viz/VideoGameSales_16917717381130/Top15GamesforPlatform?publish=yes

STORY SCREENSHOTS



CONCLUSION

Video game sales based on Genre:

- Action is the highest-selling genre both in terms of sum and average. However, the average top-selling genre is Platform.
- Sports ranks as the second highest-selling genre in sum, while Shooter takes the second spot for average sales.
- Shooter secures the third position for highest sales in sum, with Role-Playing claiming that spot in terms of average sales.
- Strategy emerges as the least sold genre both in terms of sum and average, while Adventure occupies the same position for average sales.

Video game sales based on Platform:

- NES leads as the top-selling platform.
- Wii stands as the second highest-selling platform.
- GBA secures the third position among platforms in terms of sales.
- 3DS represents the platform with the least sales.

Video game sales based on Publisher:

- Nintendo holds the position of the highest-selling publisher.
- Sony Computer Entertainment ranks second in terms of publisher sales.
- Sega occupies the third position in the list of top-selling publishers.
- Virgin Interactive is the least performing publisher in terms of sales.

Video game sales based on Games:

- Super Mario Bros claims the top spot as the most sold game.
- New Super Mario Bros takes the second position in terms of sales.
- New Super Mario Bros Wii secures the third position in terms of sales.
- Super Mario Galaxy 2 has the lowest sales among the listed games.

Video game sales based on Years:

- The year 2000 records the highest sales.
- In 2005, sales take the second spot.
- Sales in 1995 secure the third position.
- The year 2015 represents the period with the lowest sales.

Video game sales based on Region:

- North America leads in sales among regions.
- Europe ranks as the second highest-selling region.
- Other Countries represent the region with the least sales.