

Design Document 6

Boray & Miko

Data Visualization Link:

https://bonaventureedu-my.sharepoint.com/:f/g/personal/gorenbb22_bonaventure_edu/EiydevFFcBhNndHF0DIPenYB2nLI1lhri8jbVkdMpA2CTA?e=HaoKDe

Feedback:

During the design process, we gathered feedback from classmates who acted as our “clients.” The feedback received on the clear visualizations was primarily focused on ensuring consistency in labeling and improving axis readability, which led to adjustments in font size and color contrast. For the persuasive storytelling visuals, the feedback emphasized making the visual elements more striking and memorable. Based on this feedback, we enhanced the color scheme and incorporated more prominent highlights on key data points to draw the viewer’s attention to crucial aspects of the story.

Contrasting Clear and Persuasive Designs:

The clear design visuals were created with a focus on neutrality and accessibility. They used simple charts like bar graphs and line charts, which users are familiar with, ensuring that the data was presented without any bias. The goal was to provide an in-depth and unbiased portrait of the dataset, assuming that users could interpret traditional charts without needing additional guidance. The color scheme was muted to avoid drawing undue attention to any specific aspect of the data.

In contrast, the persuasive storytelling visuals prioritized a memorable narrative. We used eye-catching colors and non-traditional visual elements such as interactive components. The intention was to evoke an emotional response from the viewer, encouraging them to remember specific data points or trends. By selectively emphasizing key data, the storytelling visuals guided users toward a desired interpretation, making them more compelling and engaging.

Design Principles

Clarity and Simplicity:

- Reason for Choosing: The clear visualizations focus on delivering straightforward, unbiased data, which is crucial for accurate user interpretation without distraction.
- Application: In our clear design, using familiar charts (like bar, line, or scatter plots) makes it easy for users to access information at a glance. Muted color schemes and minimal design prevent any element from dominating attention, supporting a balanced view of the data.

Memorability in Storytelling:

- Reason for Choosing: In persuasive storytelling, it's essential to create visualizations that engage the viewer emotionally, making the data memorable and impactful.
- Application: For persuasive visuals, adding interactive elements, high-contrast colors, and prominent highlights draws attention to key insights, making certain trends or correlations stand out. This ensures viewers remember the story conveyed through the data.

Hierarchy and Emphasis:

- Reason for Choosing: Emphasizing critical data points in both the clear and persuasive visualizations help viewers follow the intended narrative or easily spot trends.
- Application: The clear visualizations apply this by organizing data logically, with essential information like axis labels and titles clearly visible. In persuasive designs, emphasis on certain data points (like platform dominance over time) using bold colors and filters guides users' focus to specific insights.

Heuristic Principles

Visibility of System Status:

- Reason for Choosing: Keeping users informed of their interaction status is essential in interactive visualizations, especially in persuasive designs where users can explore data trends.

- **Application:** In our interactive persuasive visuals, clear feedback—such as changing colors or highlights when data points are clicked or hovered over—gives users a clear indication of their engagement with the visualization.

System and Real-World Match:

- **Reason for Choosing:** Aligning data with familiar terminology helps users interpret the visuals more intuitively, making them feel more accessible and engaging.
- **Application:** Using recognizable categories like “genres” and “platforms” in our visuals ensures that users can quickly understand data groupings. This principle helps users relate to the content, especially in persuasive visuals where familiarity can enhance the emotional connection.

Consistency and Standards:

- **Reason for Choosing:** Consistent labeling, layout, and colors prevent user confusion, promoting a seamless experience across all visualization types.
- **Application:** In our clear visualizations, consistent font sizes and colors make the charts cohesive and easy to interpret. In the persuasive designs, consistent use of highlights and interactive elements reinforces the storytelling without overwhelming users with mixed design cues.

Aesthetic and Minimalist Design:

- **Reason for Choosing:** A minimalist design approach prevents overload, allowing viewers to focus on essential data. This is particularly effective in clear designs, where objectivity is the primary goal.
- **Application:** The clear visualizations avoid decorative elements, focusing on a clean presentation. For persuasive visuals, minimalist layouts highlight only relevant data, using blank space strategically to make highlighted information more impactful.

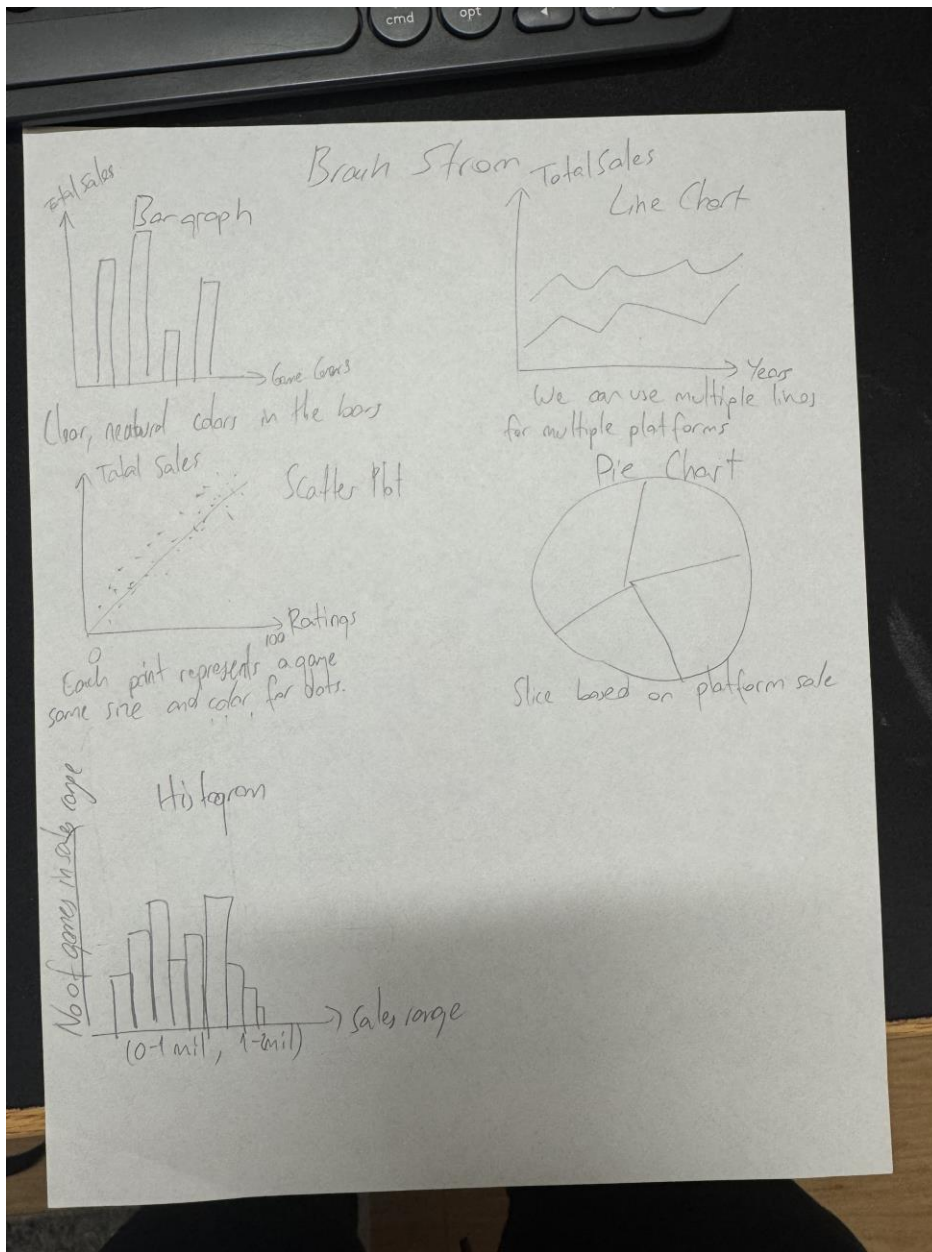
Recognition Rather Than Recall:

- **Reason for Choosing:** Reducing cognitive load by making actions visible rather than relying on user memory supports smoother navigation, especially in interactive visuals.
- **Application:** By keeping interactive features like zoom or filter options visible in our persuasive visualizations, we allow users to recognize options without having to remember

how to interact with the visualization. This simplifies user interaction, particularly in a storytelling context where flow is crucial.

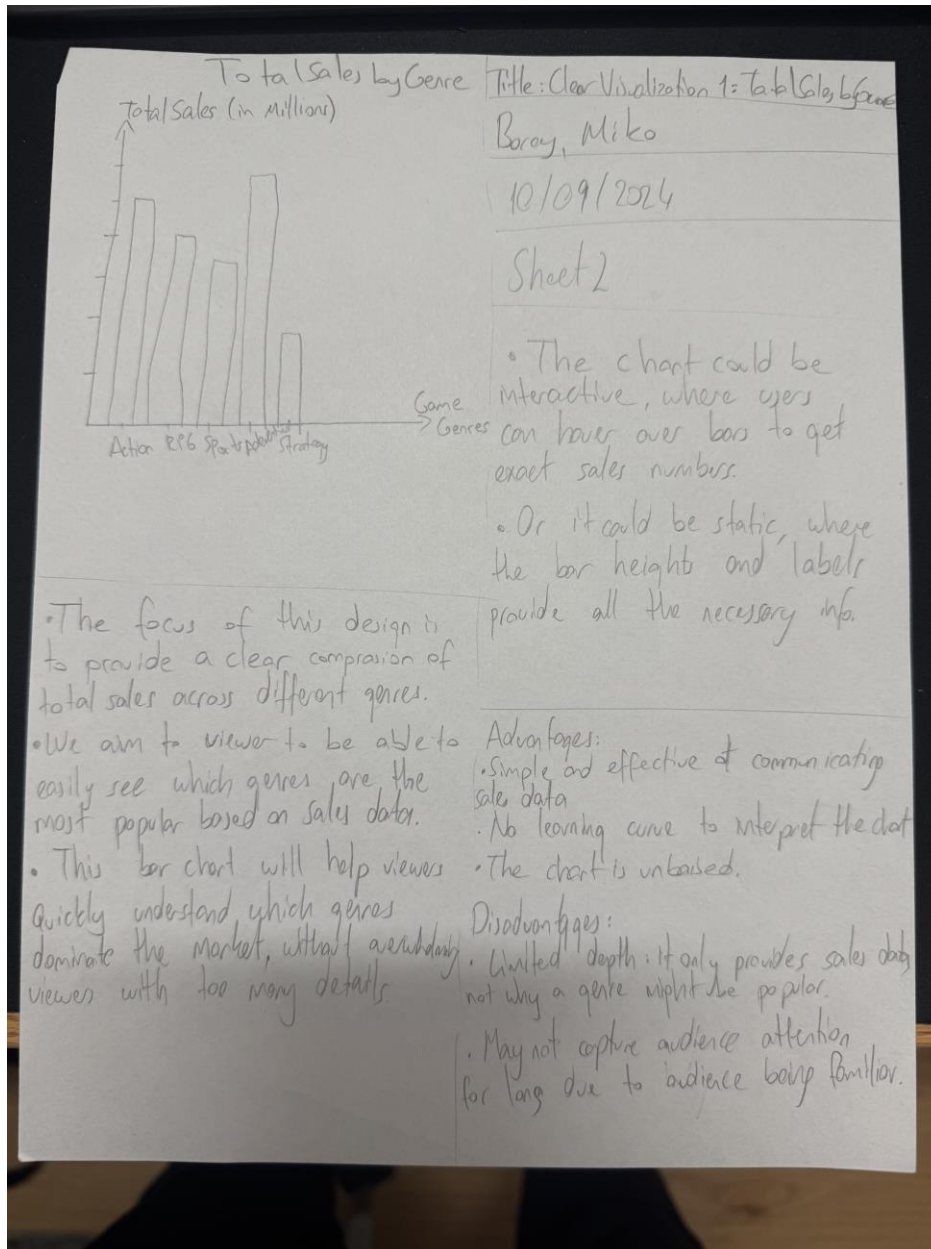
Clear Design Sketches:

Brainstorm:



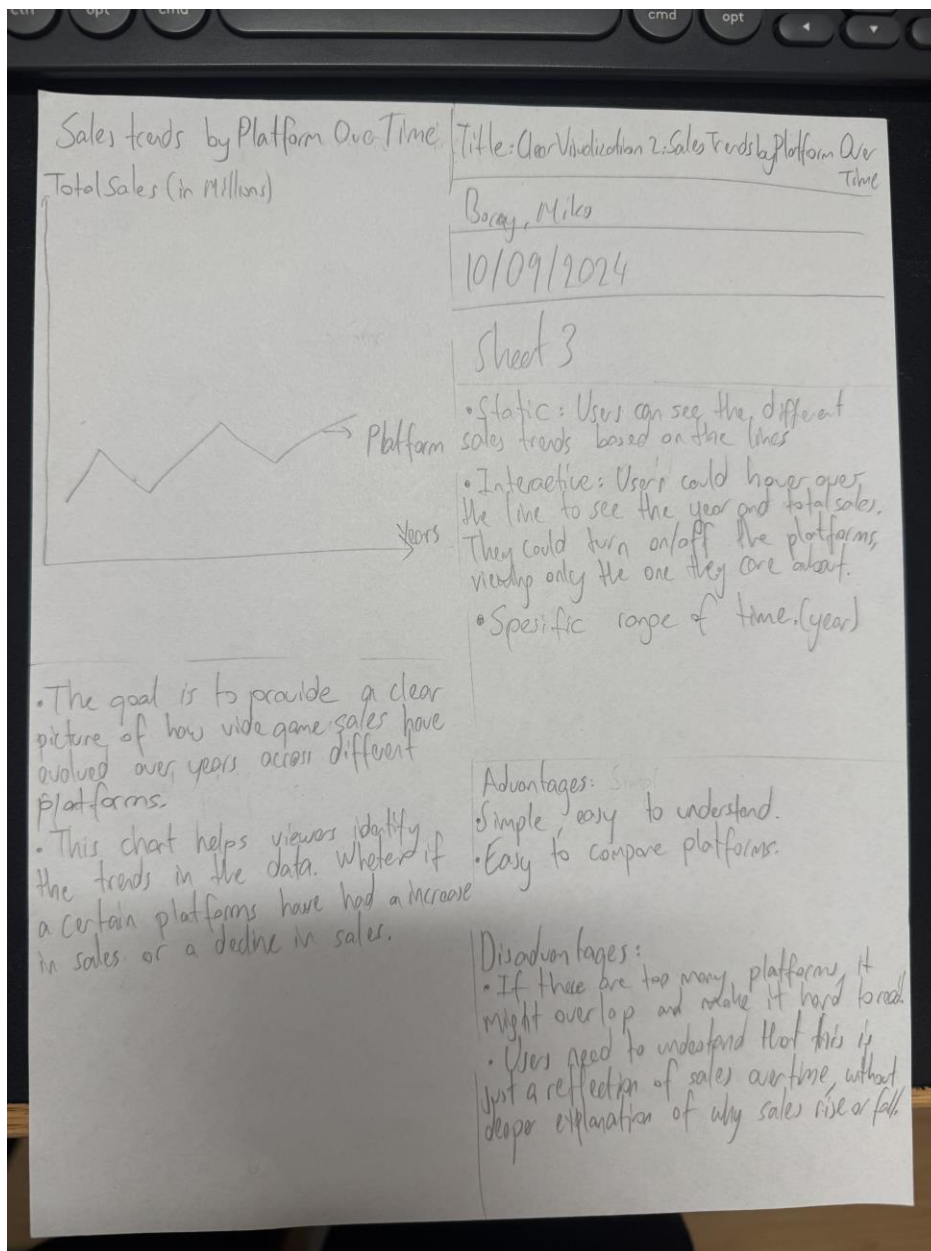
We used this sketch as a brainstorming tool. We came up with 5 different types of data visualization. This brainstorming tool consists of basic bar graphs, pie charts, and scatter plots etc. We wanted to see our options and got some feedback from “clients”.

Sheet 2:



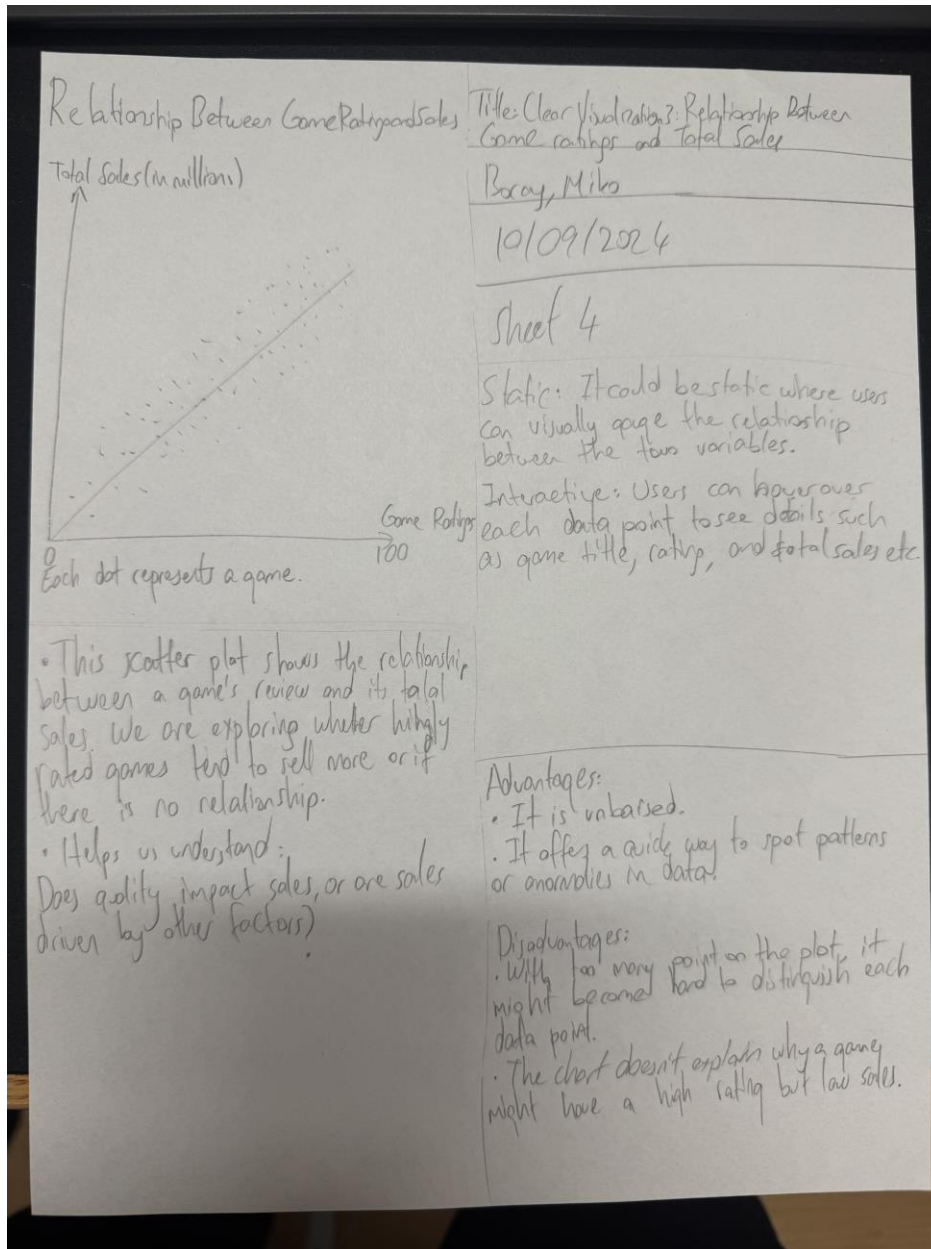
In this sheet, we wanted to see the interaction between total sales and type genres. This sheet tells us how different genres perform in sales. It is a basic bar graph which is easy to read and understand.

Sheet 3:



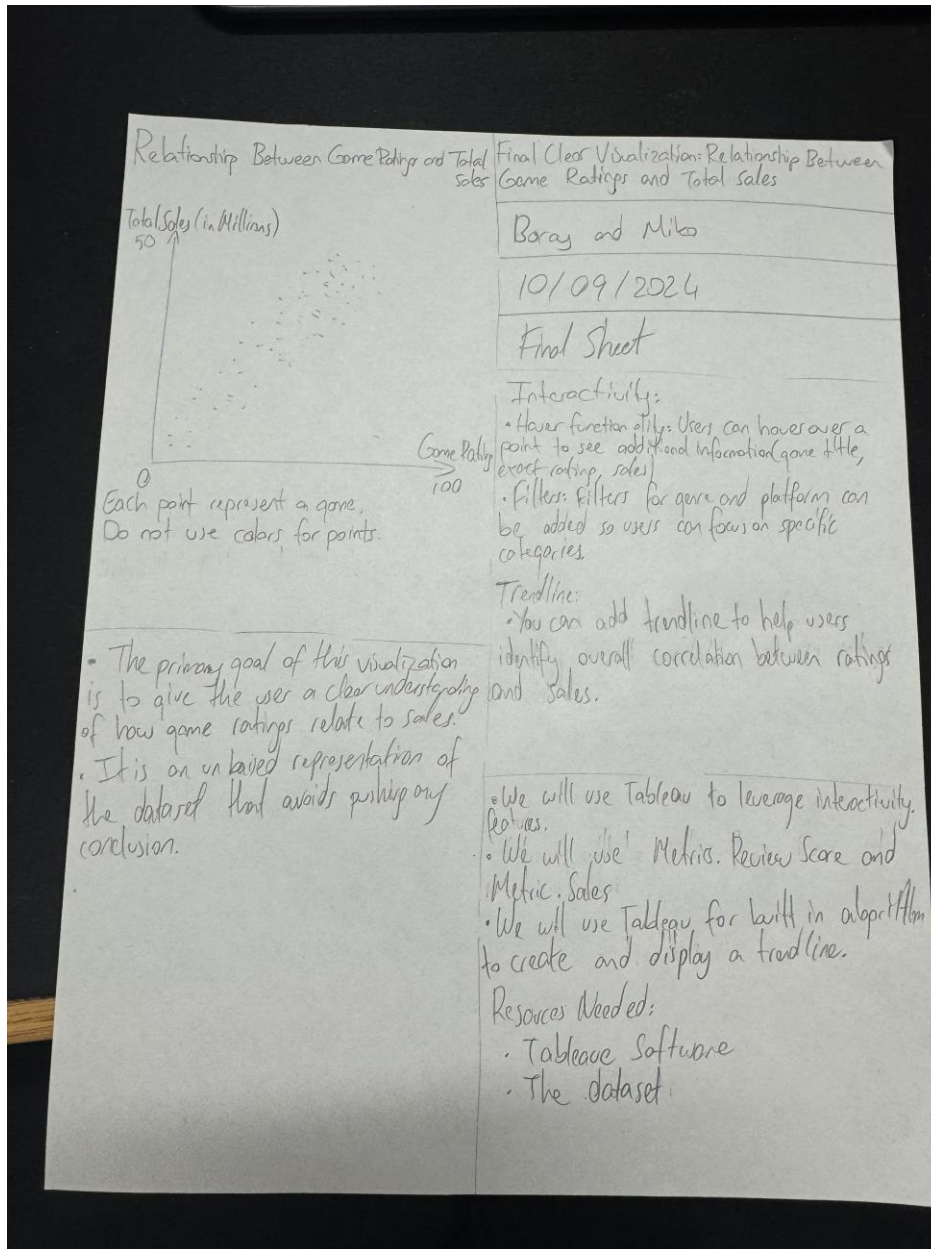
This sketch is a line chart. In this sketch, we wanted to see how well each game platform performed over the years. The performance is measured by the total sales in millions of Dollars.

Sheet 4:



With this sketch we wanted to see the relationship between the game ratings and the total sales in millions of Dollars. We wanted to see if the games with higher ratings made more money or not.

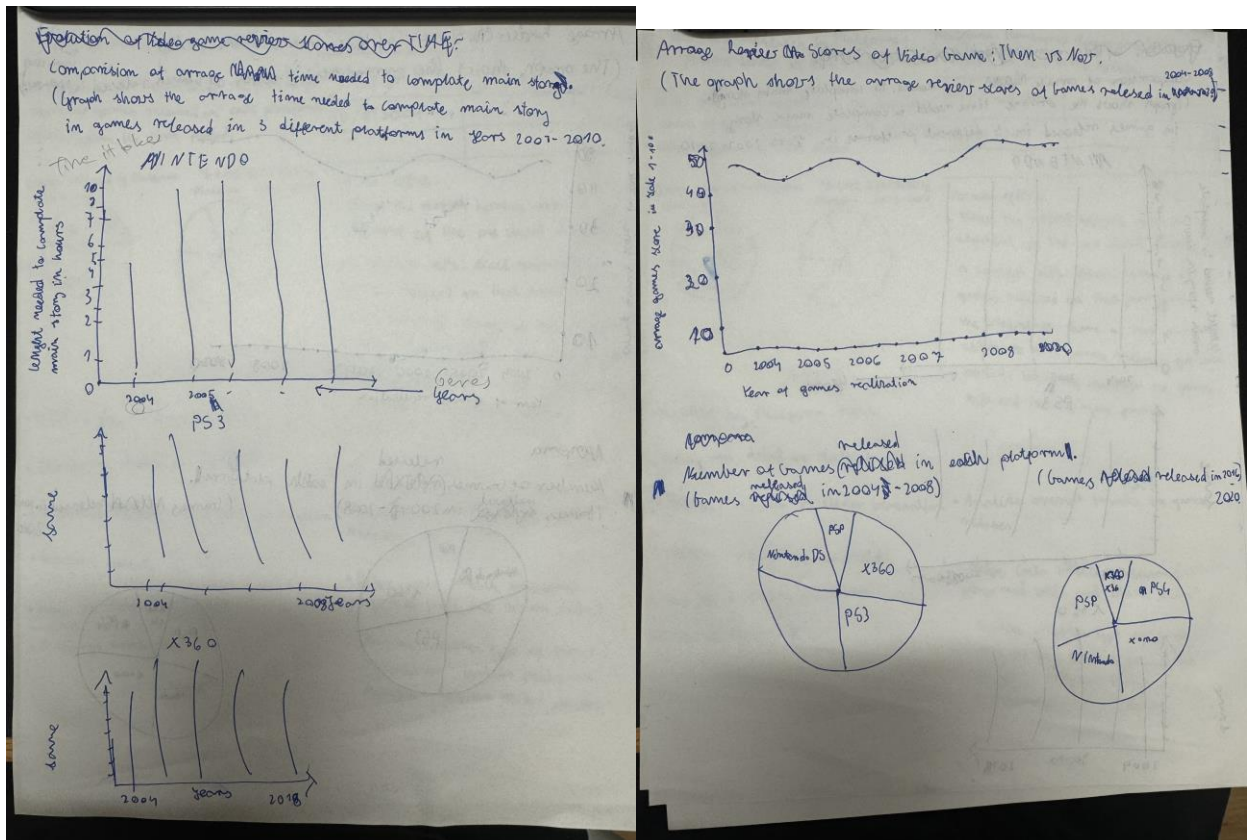
Realization Design:



As our final sketch, we decided to work with the scatter plot. In the scatter plot we used game ratings and total sales as columns and rows to see the relationship between the profit of a video game and whether it depended on game ratings. But we realized static scatter plot wasn't enough, so we added filters and highlighters to emphasize each video game. Also, we added a trendline to show the correlation between ratings and sales.

Persuasive Storytelling Sketches:

Brainstorm:



On our brainstorm there are several different visualization ideas that we initially came up with. There are visualization ideas like: Average scores of video game, number of games released in each platform, comparison of average time needed to complete main story.

Sheet 2:


GAMES Released by Platform: (2004-2006) vs. 2007-2008.

Platform Dominance: Comparing Game releases in Two Time Periods.


Each pie chart represents the percentage share of games released on each platform within given the time period.

11/10 and Doray
10/9/2004
Sheet 2

GAMES released by Platform 2004-2006



GAME RELEASED by Platform 2007-2008



Hover effect:
- When the viewer hovers over a segment of the pie chart, display a tooltip with: exact number of games released on that platform; the percentage share of that platform within the total games released for each period; total the number of games released in that time frame.

- Highlight key Platform switch
- Platform debut or decline
- Contrast newer vs older generation
- Compare console vs handhelds
- Focus on Emerging platforms
- Platform dominance
- Analyze overall trends in games releases.
- Delve into which platforms performed well and which didn't
- Examine whether type of game released on certain platform changed between the two periods.

The second sheet contains platform dominance: comparing releases in two time periods. The layout window contains two pie charts that compare games released in two time periods on different platforms. In the focus window, we have placed information such as platform debut or compare console vs handhelds. In focus hover effect has been

explained. Analysis of overall trends in games relation or examination of what type of game has changed in popularity over the years have been placed in our discussion window.

Sheet 3:

~~Comparison of average~~
 Average review scores of Video games:
 Then vs Now.

Year	Average Review Score
2004	80
2005	85
2006	80
2007	60
2008	95

Highlight significant changes:
 - Identify a year with a notable increase or decrease in average review score.

Compare genres:
 - Analyze whether certain genres perform better in specific years.

Spotlight Top/Lowest Rated games
~~Analyze whether certain genres~~

Average review scores of Video games:
 Then vs Now.

Miko and Boray

10/9/2024

Sheet 3

Hover for details:
 - The exact average review scores for that year
 - Highlighted top rated and lowest-rated game for that year

Click for Genre Breakdown:
 - Clicking a year's point allows the viewer to see a breakdown of review of that year.

1. Average review score:
 • Average review score in 2004 was...
 • Average review score in 2005 was...
 — || ————— 2006 was...

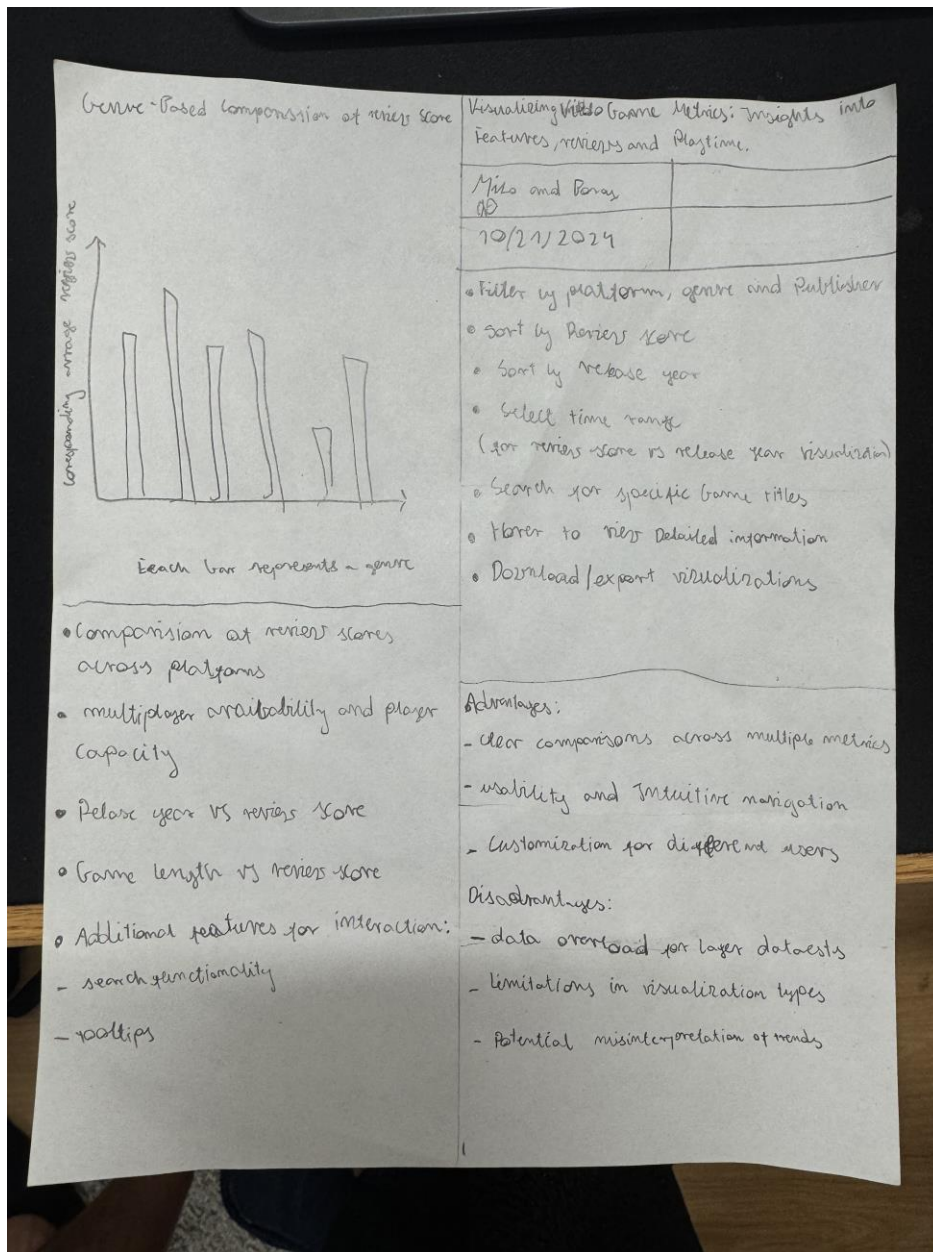
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Focus on yearly differences
 Comparison of Trends

On this sheet are presented Average review scores of video games between 2004 - 2008. Layout presents a graph that shows how games were rated on average in each year. In the

focus section we can put information such as highlight significant changes, compare genres, spotlight top/lowest rated games. In the details section there are such things as hover for details, click for genre breakdown. Things such as average review score in each year or trend comparison remain for discussion. [OBJ]

Sheet 4:



On this sheet we have placed visualizing video games metrics: Insights into features, reviews and play time. We have presented such things as a graph comparing genre with average review score. In addition, we can find here such things as relation years vs review score, learn how to perform some operations such as sorting or discussion fields such as clear comparisons across multiple metrics.

Realization Design:

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Publisher sales and Performance overview

Visualization of game publishers and their sales performance

11/10 and Barry

10/21/2024

Sheet

Number of games

Game publishers:

User will be able to zoom into specific publishers to explore their games more deeply:

- Zoom into specific publisher to reveal details about their title at the published game, genres, listed price, reviews score, console.
- Identify the best or worst performing publishers based on reviews scores or amount of all games.
- Hovering over a publisher or game will display key statistics, such as the average review score or gameplay length.

The tool will offer several functions to let users manipulate and interact with the data set:

- Users can filter by genres like action, strategy or racing
- Users can sort publishers based on the type of console
- User can filter based on release year or specific game titles.
- User can check if game is online or offline

Analyze correlations between sales, release years, type of console, genres.

• Analyze correlations between sales performance and review score

Our main Realization Design presents our final project that we decided to place here, namely visualization of game publishers and their sales performance. In the layout, a graph was presented that compares different game publishers and the number of games released in each period. In the zoom frame, we showed what happens when the user zooms into specific publishers to explore their games more. In the operations frame, we described a tool that offers several functions to let users manipulate and interact with the data set. In the last frame, an analysis of correlations between sales, relation year, type of console, genres were presented.