

# SteamViz - Milestone 2

## SteamViz

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### I. INTRODUCTION

In today's dynamic gaming industry, understanding player preferences, market trends, and the impact of game features on user experience and pricing is essential for both gamers and developers. The objective of this project is to delve into various aspects of gaming data to uncover insights contributing to identifying objectively attractive and commercially viable game categories. By analyzing game play hours, user scores and genre preferences, this study aims to show which games resonate the most with players. We also aim to find out which genres are the most addictive by checking how many hours per day on average users spend playing them. We'll also pinpoint the games that might be considered "too addictive" or risky due to their high addictiveness.

### II. DESIGN

We aim to develop an interactive web visualization where users can view and engage with game-related data. To achieve this, we will design four web pages, each offering distinct information about the games. Initially, each page will present general information, but through interaction with the visualization, users can access more detailed insights. The following sections outline the specifics of each of the four pages. Additionally, Figure 2 provides preliminary sketches illustrating the initial appearance of each page.

#### A. Home Page

When users visit our webpage for the first time, they will encounter a bubble chart. Each bubble in the chart will represent a game genre, with its size indicating the number of owners. We've opted to display the top 10 genres with the highest number of owners. Hovering over a bubble will reveal details such as the name of the most-owned game within that genre, its user score, and price. Additionally, clicking on each bubble (genre) will unveil more detailed information. This detailed view will include the distribution of user scores and owners, along with the top 5 most-owned games within the genre, accompanied by each of their individual prices, user scores, and number of owners.

#### B. Genre Addictivity Page

On this page, you'll find another bubble chart showcasing the top 10 game genres with the highest average number of hours played per day by users. Each bubble will once again

portray a genre, with its size indicating the average number of hours played per day. Hovering over each one will reveal details such as the most played game in terms of hours, along with its user score and price. Additionally, this page features box plots for each genre, providing detailed insights into the distribution of hours played within each of them.

#### C. Most Addictive Games Page

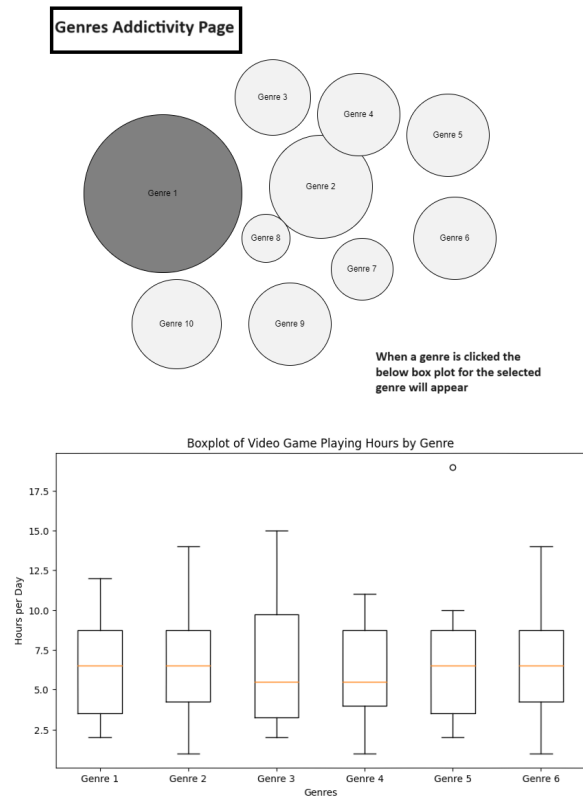
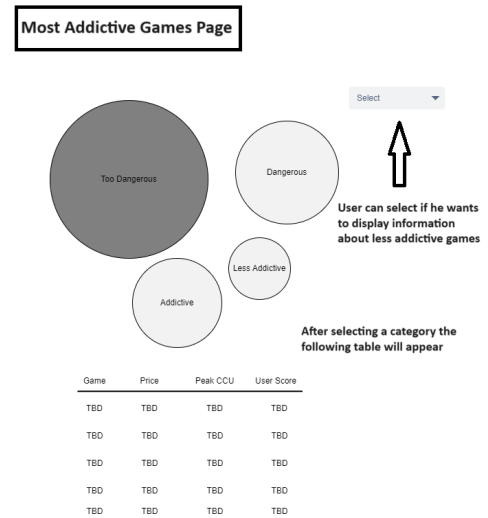
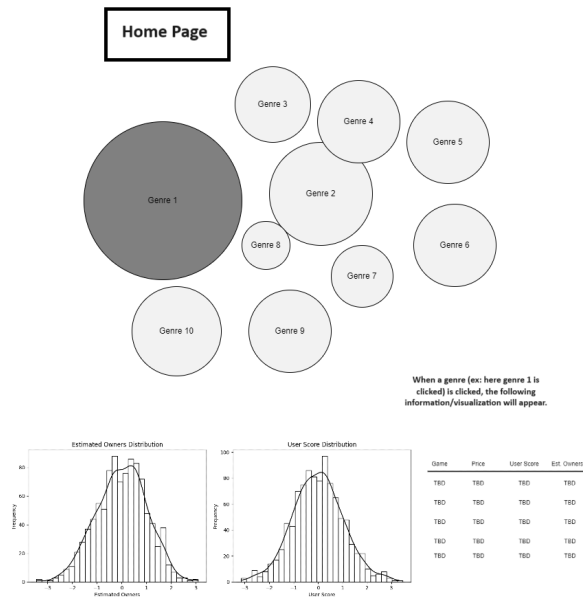
This page will present details regarding the most addictive games. We've classified games into categories such as "Too Dangerous," "Dangerous," "Addictive," and "Less Addictive." Initially, the page will feature information about the first three categories, excluding less addictive games. Users will have the option to select from a dropdown menu to access information about less addictive games. This data is particularly crucial for users, serving as a cautionary guide when considering purchases of games with a high risk of addictiveness. Upon selecting any category, users will view details of the top 5 games, including their names, prices, peak concurrent users, and user scores.

#### D. Data Page

This page will provide details about the dataset utilized in this project, along with a link to the Kaggle page for users who wish to download the dataset. Additionally, we will offer a link to the SteamDB website, where users can explore further information about games.

### III. TOOLS

For this project, we'll leverage a variety of tools to bring our vision to life. Our website's structure and design will be created using HTML and CSS, with the possibility of enhancing it further by incorporating a template from Bootstrap Temple. To effectively present our gaming data and insights, including bubble charts for genre and category comparisons, box plots to illustrate the distribution of genres' addictiveness, and histograms for the distribution of user scores and owners, we'll rely on D3.js which is renowned for its ability to create interactive and dynamic data visualizations. JavaScript and D3.js will be integral in facilitating user interactions and animations across our website. By harnessing the power of these technologies, we'll ensure seamless and intuitive experiences for users as they explore various aspects of the gaming data, interact with visualizations, and navigate the site effortlessly.



## Data Page

### Data

General information about the data collected. For the user to know where we gathered it and who made it.

Figure 2: Sketch of four pages

## IV. RELEVANT LECTURES

The majority of the tools discussed above are covered in the course's lecture material. Our primary focus lies on Lectures 1 (HTML, CSS & SVG), 2, 3 (JavaScript), 4 (D3.js, data), 5 (interactions), and 8 (maps). Lecture 6 is also pertinent to our project as it addresses color selection considerations, ensuring that our choices are user-friendly and suitable for individuals with color blindness. Additionally, we need to ensure that our visualizations remain clear and comprehensible without becoming overly cluttered, a topic addressed in Lecture 7.

## V. PAST MILESTONE 2

Given the structured nature of our data story into four distinct pages, working in parallel will be straightforward for us. Additionally, there will be ample opportunity to reuse a significant portion of the code. In terms of additional work on top of what is described above, we will endeavor to enrich each page individually with more statistics, for example including more distributions once a bubble is clicked, filtering for certain elements (such as including subgenres) and more. Another interesting work can be done on the addictivity section, where we can compare side by side different subcategories of addictiveness.

Finally, past the details, we will re-examine our entire web page in terms of style and user interfaces, and incorporate what we learn throughout the semester to make it more

attracting. We will also look into using frameworks and tools such as React, Tailwind, etc. to make it smoother to work on our project, and the final result more pleasing to the eye.