Team juicyfruit: GameBuddy

Project Summary

Our project aims to create an account based website that users can use to find game suggestions based on their interests. The user can find games based on genre, multiplayer compatibility, price, as well as other features, and they can add the games they play into their own personalized list. There will also be an option to connect users based on their shared interests and show which games that they both play, or might enjoy playing together. The user will also be able to filter based on the platform they want to play the game in, since some games are available only on PC, whereas some games are available only on a console. As the database contains many thousands of games and a huge variety of genres to filter from, users will undoubtedly be able to find games that they will enjoy playing.

Description

There were almost 11,000 games released in 2022, but other than a few mainstream ones, most people would not be aware of the majority of the games. With our website, the user will be able to find more obscure games that they might never have heard about. The problem we want to solve is to save the user's time in finding a new game to play. Oftentimes, after we finish playing one game, it takes a long time to find another game to play, simply because there are so many options available. Using our GameBuddy website, the user can narrow down all the available games to just games they might want to play and look into it more from there. Furthermore, the website provides a good way to connect with others playing the same game as you, even lesser known games.

Data contained

The dataset we are using is data on Steam games which contains over 13,000 rows and more than 70 columns. The data is obtained through data.world (source), which was provided on the TA list of possible datasets that can be used. This data is a combination of publicly available data from the steam API itself as well as steamspy.com, which is a site that collects data on steam user profiles.

Due to the massive amount of data collected in this dataset, there are many different attributes that could be used for multiple different purposes. Almost anything someone would want as data will be in this dataset. It contains attributes on game information such as the title, game descriptions, supported platforms, amount of players, game genre and many more different categories. The data itself can range from any numeric value to a boolean value to a string all depending on what the attribute itself is trying to convey.

Basic Functionality

The primary concept behind the website is to allow users to select certain attributes they are interested in and get game recommendations. The user can input their own preferences and based on their preferences, the website would generate a list of recommendations. There can also be a more interactive search where the user is specifically looking for certain attributes in a game. It could be as simple as just selecting a certain genre they are interested in, or it could be a more advanced search including price limitations, a certain number of active players, and other attributes that may interest them. A more complex feature is that the users can also add friends to the website, which creates a more interactive experience where they can see their friends preferences and get recommendations based on that.

Creative Component

A good creative component that could be added would be the friend list idea where the user can get personalized recommendations based on their friends. Another function we want to implement is in the case where the user selects too many attributes to the point that no game matches their expectations. In a case like this, it would be useful to tell the user that no games are an exact match, yet still provide a recommended list which is similar to their preferences. This can be challenging to implement as the program would have to choose itself what it deems more important for similarities to the requested search. We can achieve this by creating a ranking for the attributes for the program to use when deciding what is the most important aspect to what they search, or we can also ask the user what is non-negotiable for them when it comes to looking for a game.

Usefulness

This project provides users game recommendations based on a combination of many metrics such as previous games played, genre preferences, friends' games, reviews & computer specifications. While there are other applications that recommend games, we want ours to provide a more comprehensive and personalized experience that will recommend the user games they will be more likely to enjoy playing.This web app will also allow the user to view more information about a recommended game, rather than having to go to some external source to find out more details. Putting all the relevant information into one web application makes finding games more streamlined compared to other similar applications.

Realness

We will get our data from the Steam Games dataset as well as the Steam Reviews dataset. The Steam Games dataset contains attributes about games sold on Steam, examples include Recommendation Count, Price, Categories & Genres, Amount of owners/players, PC Requirements/Recommended Specifications. The Steam Reviews dataset contains both text & numeric reviews from people who have bought a certain game on Steam & left a review. This dataset will help supplement the steam games dataset which has many blank/null values in its

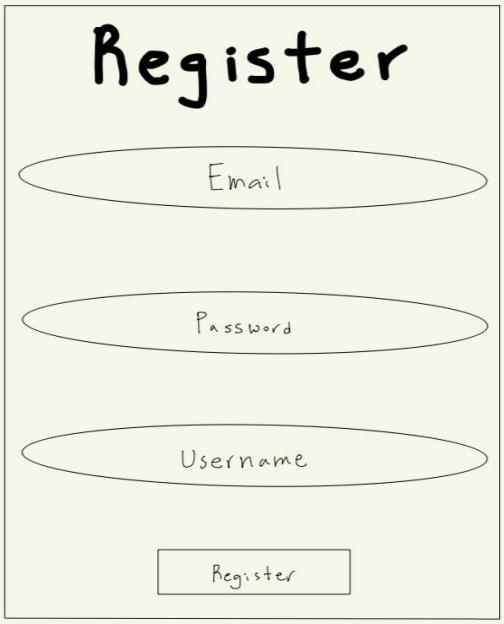
“reviews” column. We could also incorporate a CPU & GPU Performance dataset to allow the user to input the specific specifications of their computer and then query the performance data to see if it meets the requirements from the Steam Games dataset. Here are the links to the datasets:

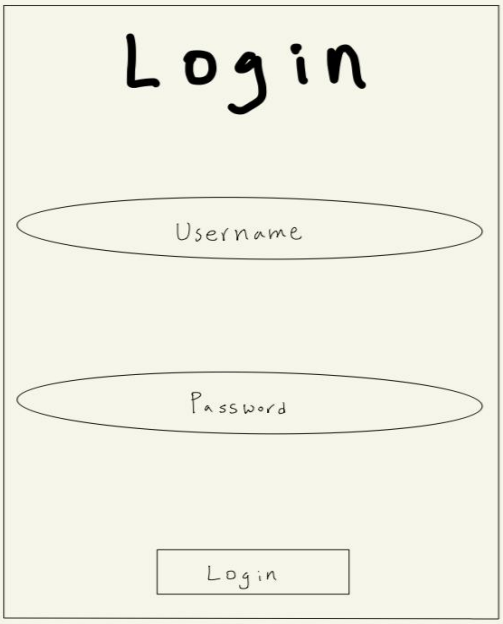
Steam Games Dataset:
https://data.world/craigkelly/steam-game-data
Steam Review Dataset:
https://www.kaggle.com/datasets/andrewmvd/steam-reviews
CPU & GPU Dataset:
https://www.kaggle.com/datasets/michaelbryantds/cpu-and-gpu-product-data

Functionality

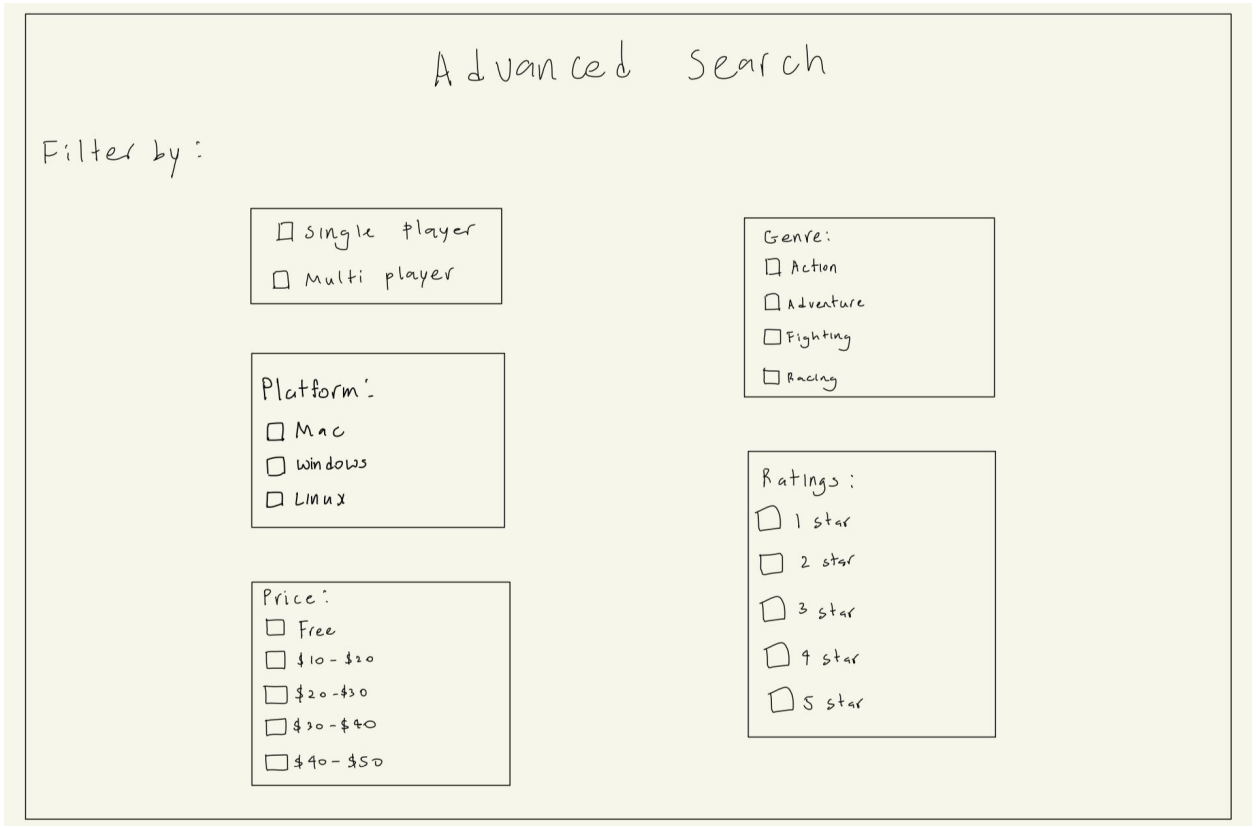
We plan to have the user login & input information about their game genre preferences, past games they have played and to add PC specifications if they know them. We also want the user to be able to add friends through this website in order to incorporate recommendations based on friends games as well. The user will also be able to change & add to any of this information as well as having the user rate the past games they have played in order to better tailor and recommend games similar to ones they have enjoyed. We also want the user to be able to filter for certain attributes(for example, only looking for multiplayer games, or games under a specific price, etc.). Finally, the user will also be able to view more detailed information about a game recommendation, such as price, description, text review, etc. This is so they don’t have to use external sources to find this information making the process of find their next game to buy more streamlined.

Low Fidelity UI Mockup






Welcome
My Game Ratings
Game Reviews
My Game Recommendation
Advanced search
My Game Prices
Add Friends


Advanced search
Filter by:
Single player
Multi player
Genre:
Action
Adventure
Fighting
Racing
Platform:
Mac
Windows
Linux
Ratings:
1 star
2 star
3 star
4 star
5 star
Price:
Free
$10 - $20
$20 - $30
$30 - $40
$40 - $50

Work Distribution

Database management:

- Junu will be responsible for implementing advanced search features, developing logic that generates game recommendations based on user preferences. This includes storing and incorporating attributes such as genres, ratings, and prices into the advanced search system.

Frontend Development:

- Afif will take charge of implementing the user interface, encompassing the development of input functionality for user preferences, recommendation viewing, as well as the interactive search feature and displaying friend preferences.

Backend Development:

- Manu will be responsible for developing the core logic that generates game recommendations based on user preferences. Additionally, Manu will also handle the implementation of advanced search features and the integration of friend preferences into the system.

Security:

- Rishi will work on implementing user authentication mechanisms, including managing user roles and permissions. This responsibility will be securing user data, handling user authentication-related tasks, and ensuring the smooth functioning of logins and registrations.

We also plan on working flexibility and tentatively to adjust the tasks and roles based on the team's progress on the project.