Anime Lovers - Process Book

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Project Repository

https://github.com/Jonathan5100/AnimeLoversUwU

Live Website

https://jonathan5100.github.io/AnimeLoversUwU/home

Overview and Motivation

Provide an overview of the project goals and the motivation for it. Consider that this will be read by people who did not see your project proposal.

The main point of this project was to find trends in popular anime, relationships between anime and their genre, and also highlighting highest rated genres and highest rated animes in a genre.

For trends, we are showing how long or short an anime is affects their anime rating. For relationships between anime and their genre, we are showing all the genres and their connections with each other if anime encapsulates both genres.

Our primary goal for this project is to help anime lovers like us to find new shows they might want to watch based on the relationships and trends we are showing in our visuals. For example, they might pick a shorter anime if the trend shows a higher rating for shorter anime or pick a specific genre based on their ratings.

Related Work

Anything that inspired you, such as a paper, a web site, visualizations we discussed in class, etc.

For showing the trends of anime sizes and their rating, we got our inspiration from a pokemon site that did a scatter-plot on pokemons statistics.
https://sunsiu.github.io/poke-data/

For showing relationships between animes and genres, we got our inspiration from a site that showed twitch streamers and their followers connecting if they watch both streamers.
https://twitchatlas.com/

This created a neural like graph that we also wanted to implement to show our relationships

Questions

What questions are you trying to answer? How did these questions evolve over the course of the project? What new questions did you consider in the course of your analysis?

Our goal was to empower users to have a new method to find new animes to watch. We hope to offer a unique sense of exploration when trying to find anime unlike any other simple list. Our goal is that through the bee-swarm chart and pie chart users will be able to find specific animes statistically similar to their favorite animes. Then through the graph we hope to have our users be able to explore new genres by seeing animes with significant overlap.

Data

Source, scraping method, cleanup, etc.

The source for our data is a crunchyroll csv file. We did not have to do any scraping. No cleaning is really required too, the only work we had to do was adding a way to map genre to an anime list instead of just an anime to a list of genres that contain it.

Exploratory Data Analysis

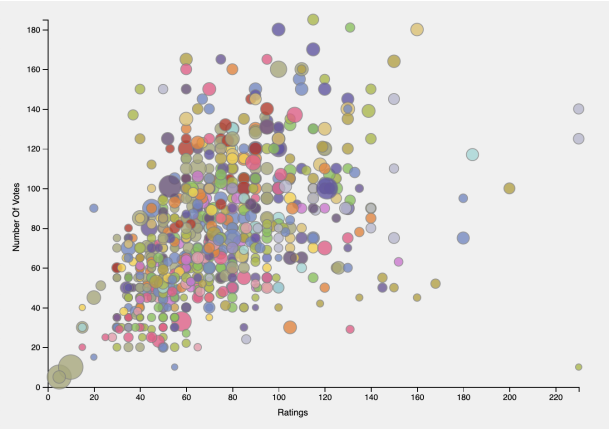
What visualizations did you use to initially look at your data? What insights did you gain? How did these insights inform your design?

To start we explored the original crunchyroll website and saw how they present their data. They have grouping by lists and sorting by rating. Along with suggested animes. We did think this was a really cool idea but we found navigation to be a bit mundane. This is where we decided to take some of their ideas like grouping by category and really expand on it and give it a fun new unique visualization.

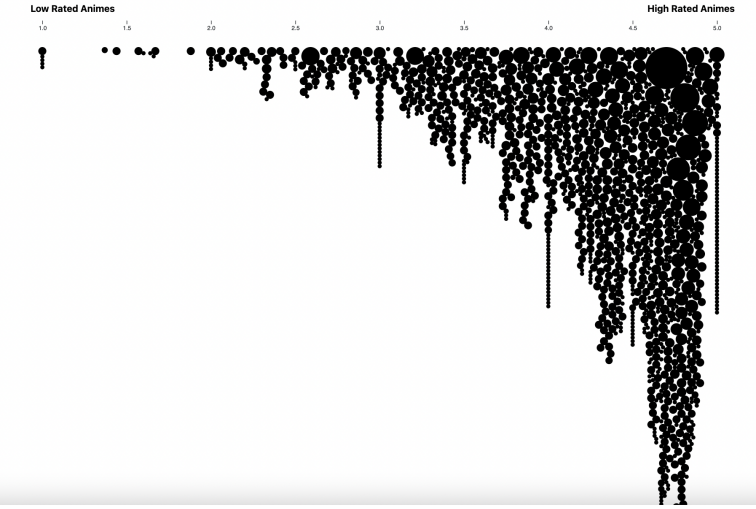
Design Evolution

What are the different visualizations you considered? Justify the design decisions you made using the perceptual and design principles you learned in the course. Did you deviate from your proposal?

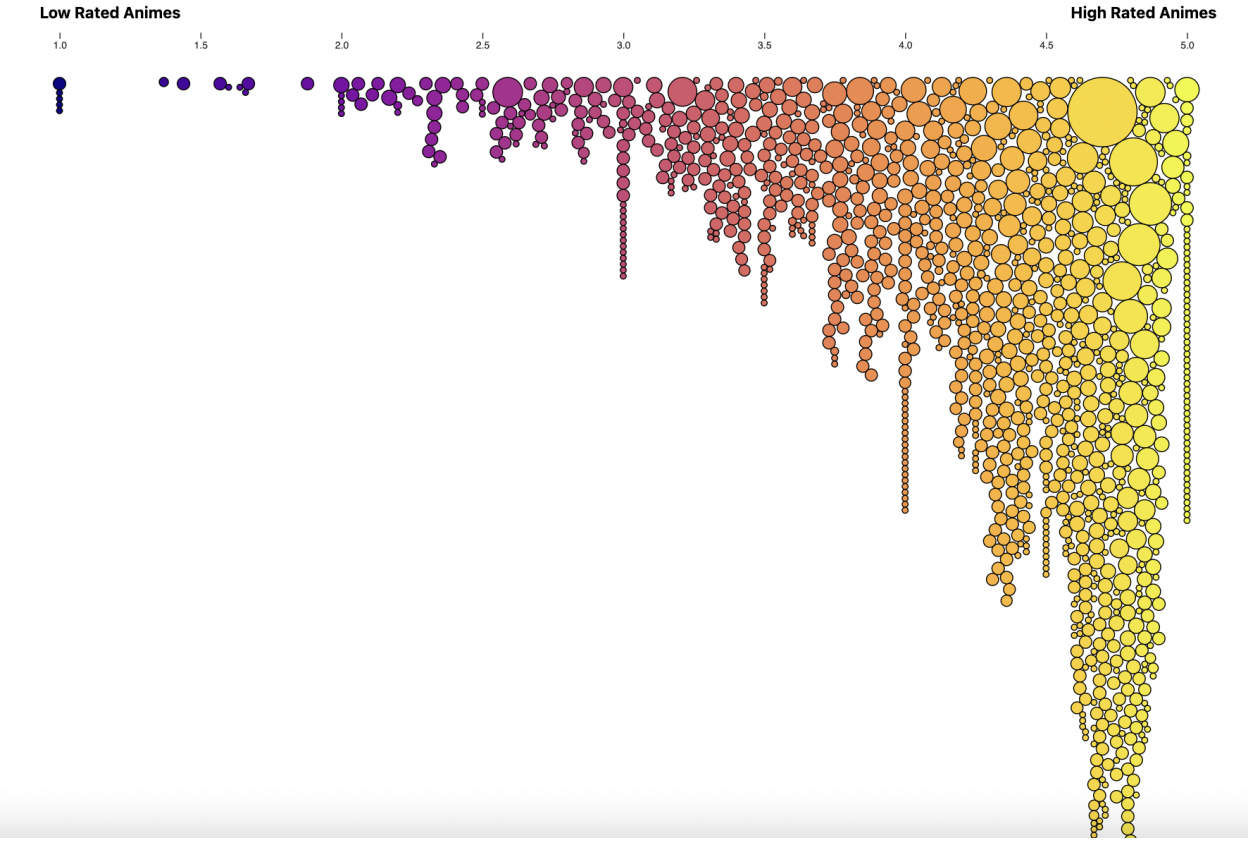
The envisioned goal for the scatter plot was one that would show ratings, votes, number of episodes, and genre. As can be seen from the description and image of the graph, trying to decipher what is going on became difficult. There was too many factors to consider when analyzing a node in the graph. It was very messy and was something we ended up scraping.



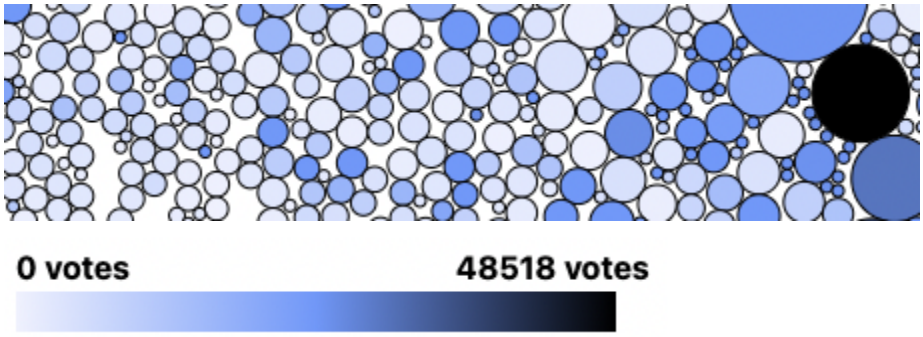
We ended up coming up with a graph that shows ratings and number of episodes for all animes. This graph was more simple and easier to comprehend. This visualization for the graph was one where color is not utilized. As will be seen in the designs ahead, color doesn't really have a place in the graphs. Choosing one color for all nodes was considered as shown below.



We decided to use color to encode the ratings of animes. The darker the node, the lower it is rated. This is a graph that reiterates ratings, shows the number of votes to size of nodes, and ratings through position.

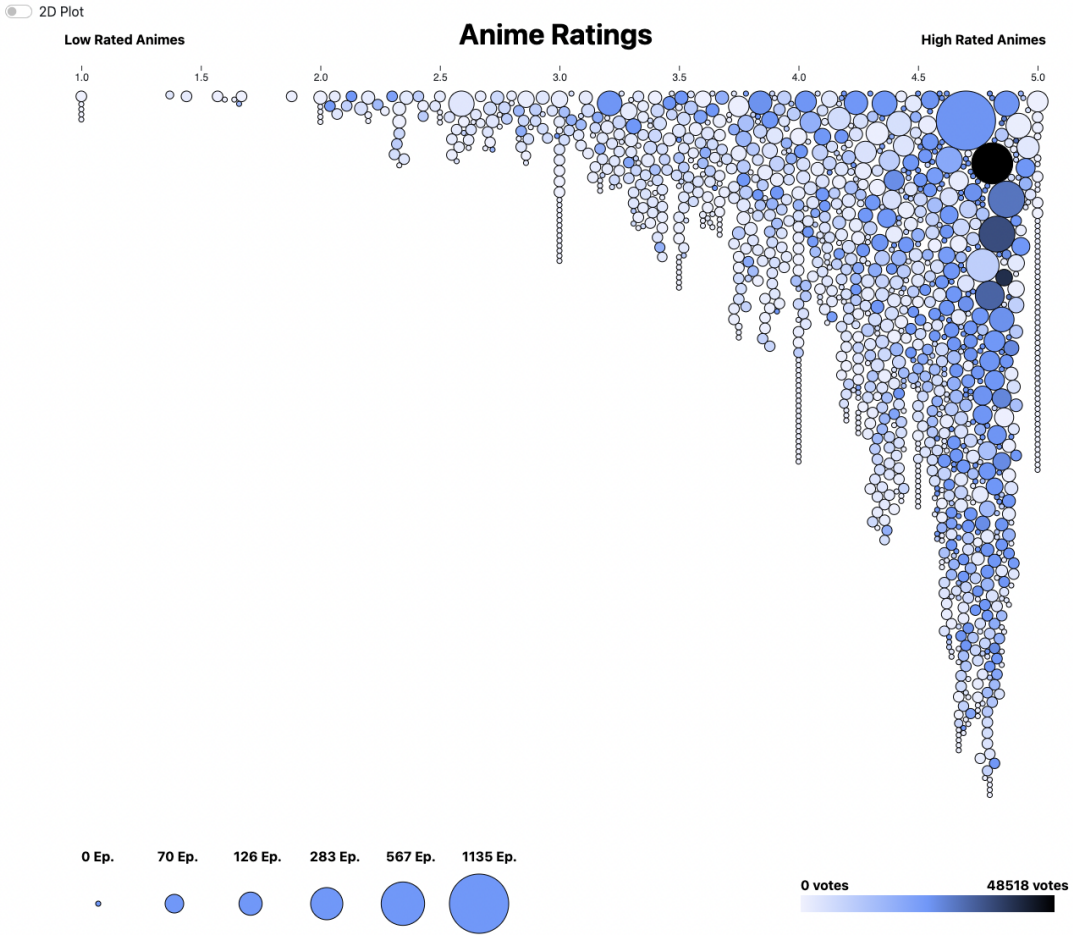


After some discussion with the TA, we decided to reimagine the scatter plot. For one, the color does not really add on to the information we learn, thus we updated the color to show the number of votes.



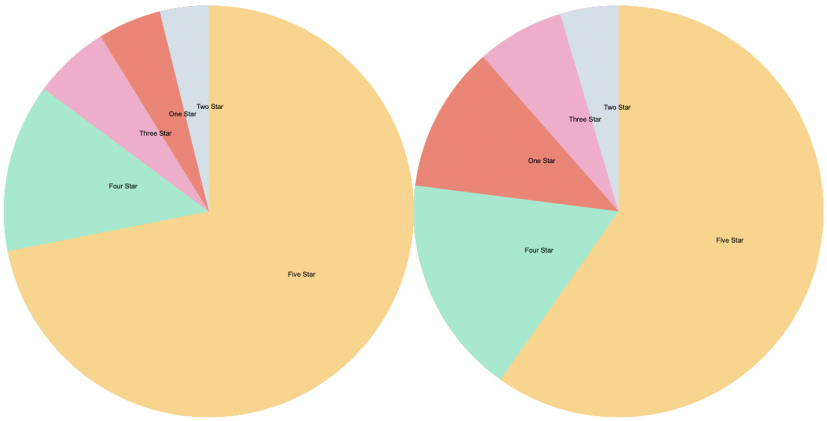
Additionally, we decided that area is a difficult channel to analyze, thus we decided to implement a new graph. This graph does not utilize size to show episode count, rather it uses position. Now, there is a toggle button between the 1D beeswarm chart and the new 2D scatter plot.

OLD:

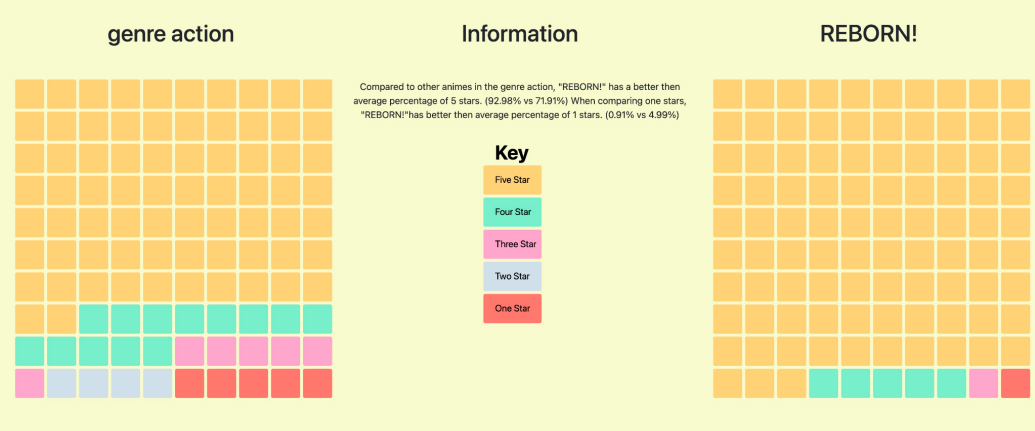


NEW:

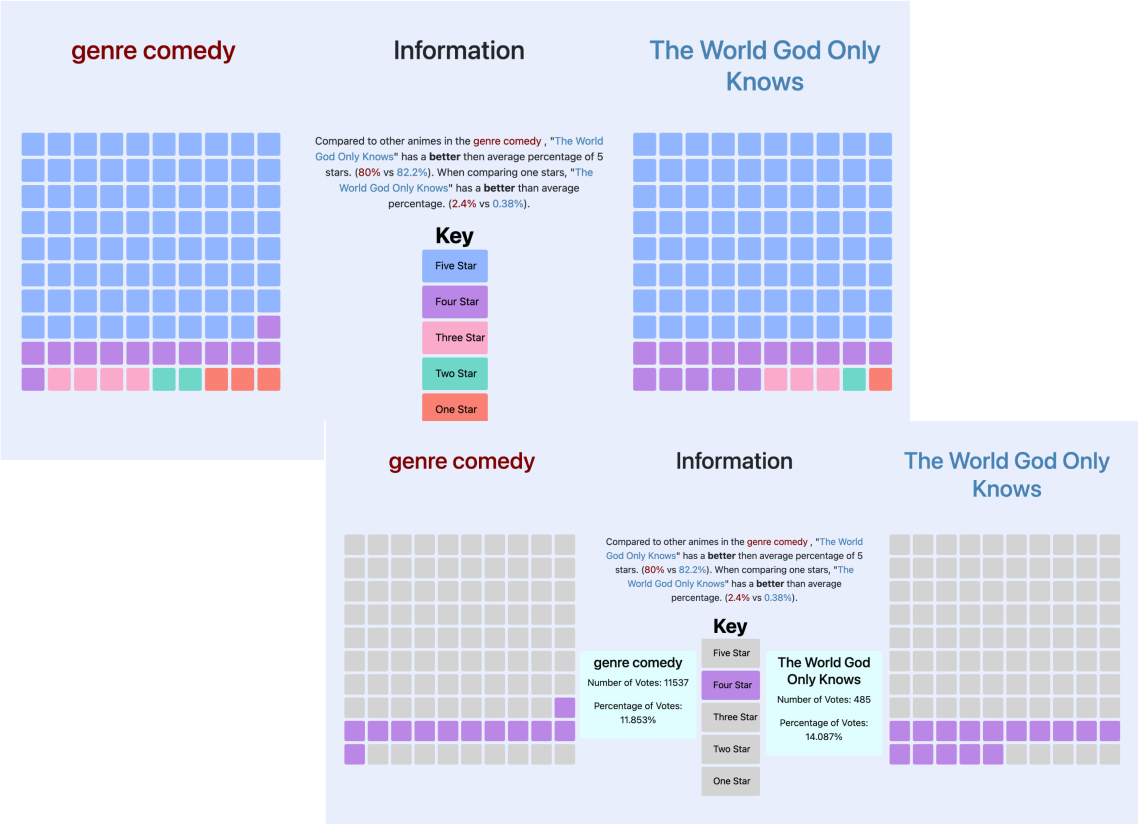
With the pie chart we started off by wanting to show a specific anime compared to all in animes in that genre. Here is the first iteration of the pie chart.



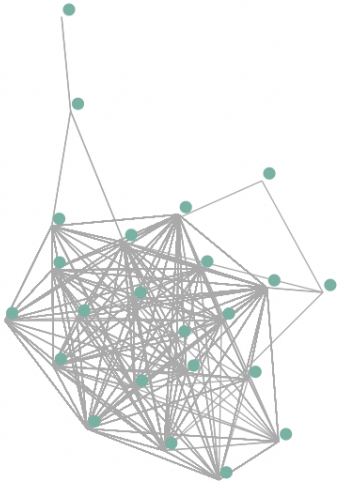
After seeing the pie chart it felt too messy especially since one star rating would tend to dominate the slices and make the remaining unreadable. This is when we switched to a waffle chart which helped tremendously. We also added a bit of storytelling in the center of the two waffle charts.



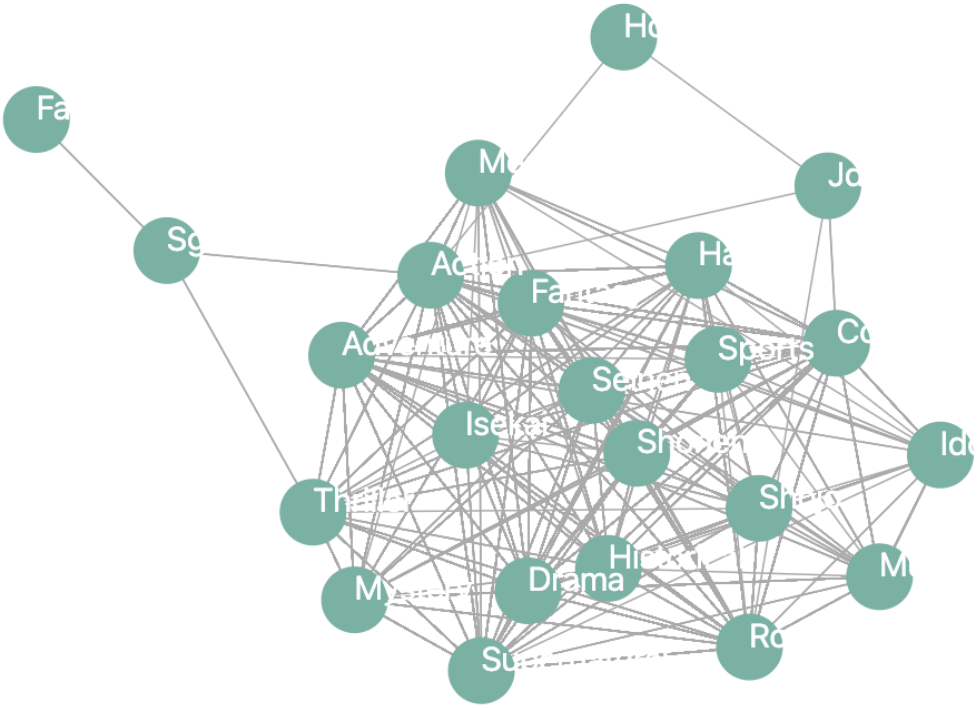
The next and final iteration we added better coloring to fit the theme of the whole website. And the story telling got a color injection in order to better show what pieces are generated dynamically. We also added an interaction even on hovering which also has a bit of storytelling.



This is our first graph, it is just a beta test of the design of it. It was created using d3's force simulation graph.



For the second evolution of the graph, we created the graph using the anime data and decided that the nodes should be the Genre and the edges be the animes that have both genres.

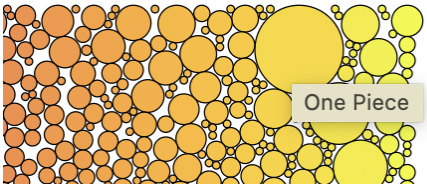


This is the final graph. We cleaned up the graph to make the nodes bigger and words more visible. There was also some talk with the TA about the last version of the graph being too hard to see the edges for the animes so we decided to make the edge width the amount of animes that has both animes. So the wider the edge, the more animes have genres in both. Finally we added interaction with the current anime selected on the webpage. Whatever anime is selected, it will highlight the genres in that anime and the edges connecting them if any.

Implementation

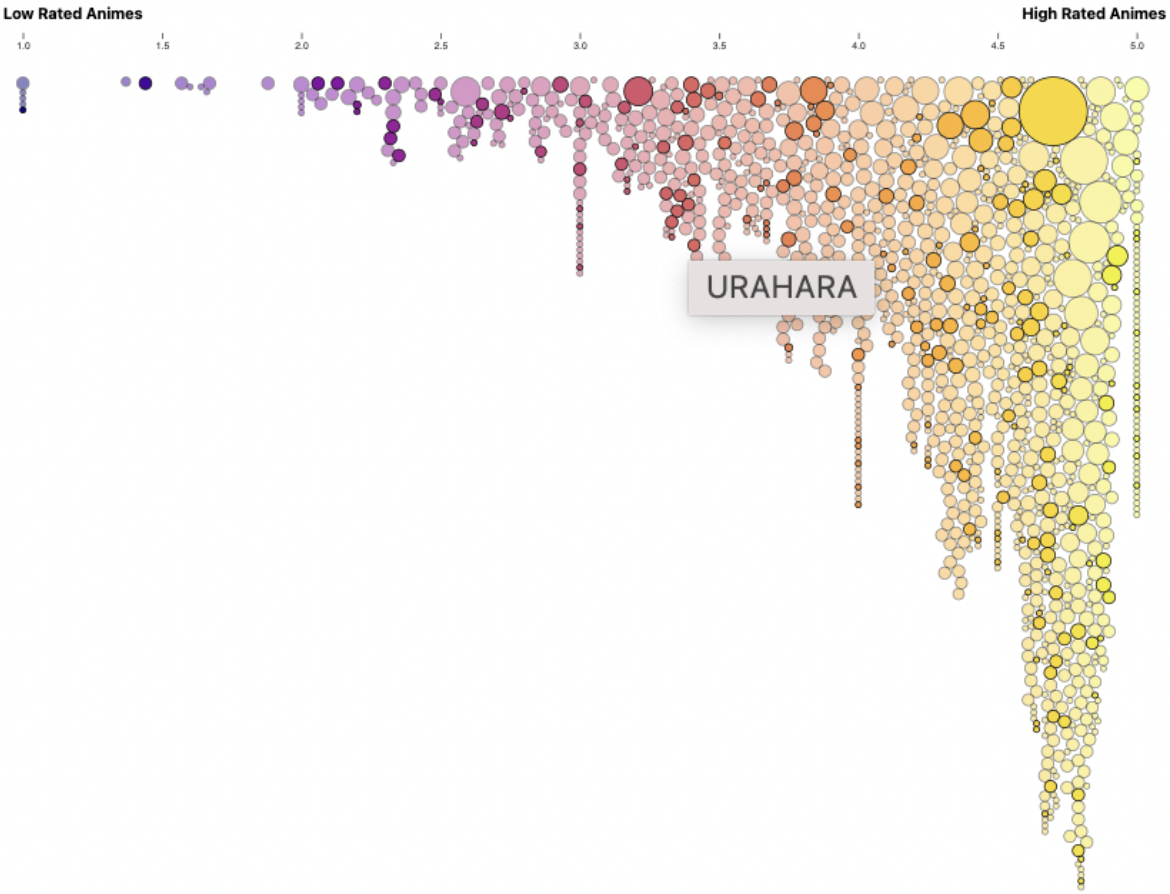
Describe the intent and functionality of the interactive visualizations you implemented. Provide clear and well-referenced images showing the key design and interaction elements.

Our visualizations are separated into three distincts graphs. The first is a scatter plot. The interactivabilty on this graph includes tooltips and the highlighting of specific genres and details pertaining the the genre.

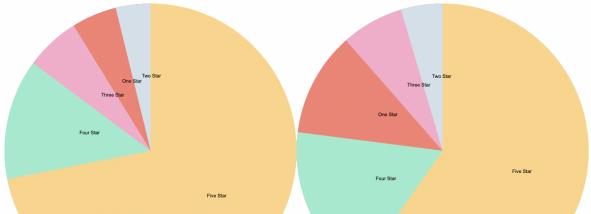


The first is quite simple. When it is the case a node in the scatter plot is hovered over. The title is shown of the anime being highlighted. In the future, we will have the ability to understand more about the anime, such as ratings, genres, etc.

The second has to do with the interactivabilty of the scatter plot, a selected anime, and the genres of an anime. When it is the case that an anime is selected, the first thing that will occur is the nodes of the graph being highlighted such that if any anime shares a genre with the selected, it will be highlighted. Second, the pie charts are updated.



The pie charts represent rating distributions of a particular selected anime and for the genres of the anime. This way we are able to better understand how a selected anime compares to average of animes in the same genre.



Evaluation

What did you learn about the data by using your visualizations? How did you answer your questions? How well does your visualization work, and how could you further improve it?

From this project, we wanted to better understand anime's and how populations receive them. We wanted to be able to see how shows are rated based on the amount of ratings they get, the genres they are in, and the number of episodes an anime has. Thus, we decided to create a scatter plot that shows rating, interactibility that portrays genres, and how things like genres and episode counts interact with the rating of a show.

We learned some interesting things about how anime's are received by the world. First of all, we see from the data that it is the case that anime's are more often than not rated higher than low. This is evident from the increased amount of anime's the higher you go in the rating scale.

Next, we see a correlation in the number of episodes an anime has and how high it is rated. It is never the case that a show with a high amount of episodes is received correctly. From this, we can infer that only properly received shows get a grand amount of episodes.

In terms of encoding these answers, a better job can be done. First of all, allowing a specific highlighting of a single genre for a selected anime would be optimal. For example, for a show with genres comedy and action would, our graph would allow the highlighting of comedy OR action. As of right now, it does both.

The plot chart also uses color incorrectly. It uses a repetitive encoding for the rating of an anime. The darker the color of the node, the lower it is rated. To correct this and utilize color efficiently, we can use a linear scale for color to show the amounts of ratings a single show has. The darker the color, the more ratings it could have.

Another issue to improve is the simplicity of the pie chart. It is too reductive of the data at hand, and to solve this, we will convert this graph to a waffle chart. This would allow for a better understanding of the sections and slivers of the rating distribution. We want to explore the most of our capabilities, and a waffle chart allows us to do this without making compromises to the data we have.

Finally, the link-node graph was one that proved to be a messier than what was envisioned. To accommodate for this, we will dedicate more time to correct how jumbled it looks. We will play with the forces and distances of the nodes to correct the look of it. Similarly, we will make the graph more aesthetically pleasing by adding more color to it.