Milestone 2

Project goal:

The goals we have for this project are:

Recommend quality movies based on the preferences of the person using them. To do that we want to make a movie recommendation site based on IMDB top 250 movies. Our project is divided into two different modules to achieve our goals.

- Data Visualization module:

We will be visualising some of the data on the IMDB top 250 movies. Which gives us an intuitive representation of some of the connections that exist directly in these films. e.g.: movie sale/ income bubble chart, actor/director relationship networks.

- Movie Recommendation module (Core Visualization):

Unlike the common recommendation sites on the market, we wanted to visualise the bland part of the filter section and wanted to increase interaction with the user on selecting the key words of filter. When searching for a quality film you want to watch, not only can you type the name of the film directly into the search bar, but you can also use the filter provided on the website to find the film you want to watch step by step. For example, we will use word cloud to visualize the genre filter, use map to visualize region filters. These visual filters can greatly increase the interest when searching for films and attract users to explore the website.

After the user searches for some kinds of movies, they are interested in, we will use some machine learning recommendation algorithms to recommend some relevant movies to the user.

Recommendation (core visualization):

In our recommendation module, we have two different sections.

- Searching section. In addition to the usual search field where you can enter the film title directly, we also offer visual filters. For example, we want to use an interactive word cloud for the genre filter, (Figure 1) or using interactive maps to visualize the region filter. If you wish to use a simple and straightforward filter, we will also provide some basic filters such as selection box or tag. Users are free to choose their preferred search method.

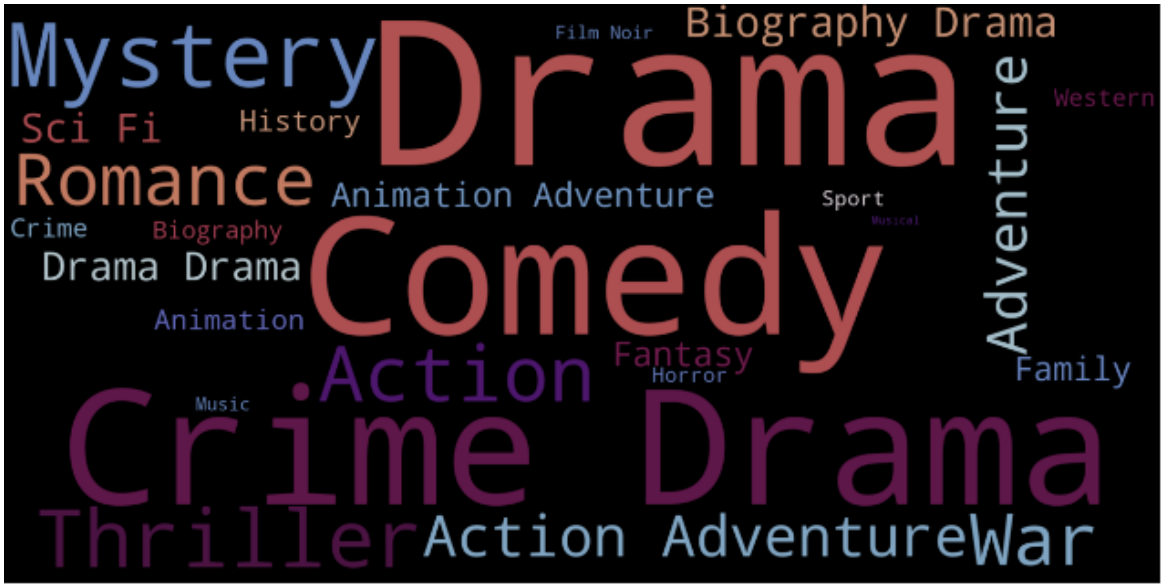


Figure 1: Genre word cloud filter

- Recommendation section. In addition to simply listing the recommendations, we also provide a visualisation of the recommendations: a relationship network of all IMDB top 250 films.(Figure 2) When the user adds a filter or searches directly for the name of a film, they are directed to the film's location in the network and the area connected to the film is enlarged so that the user can visually and clearly see the recommended films related to the film.

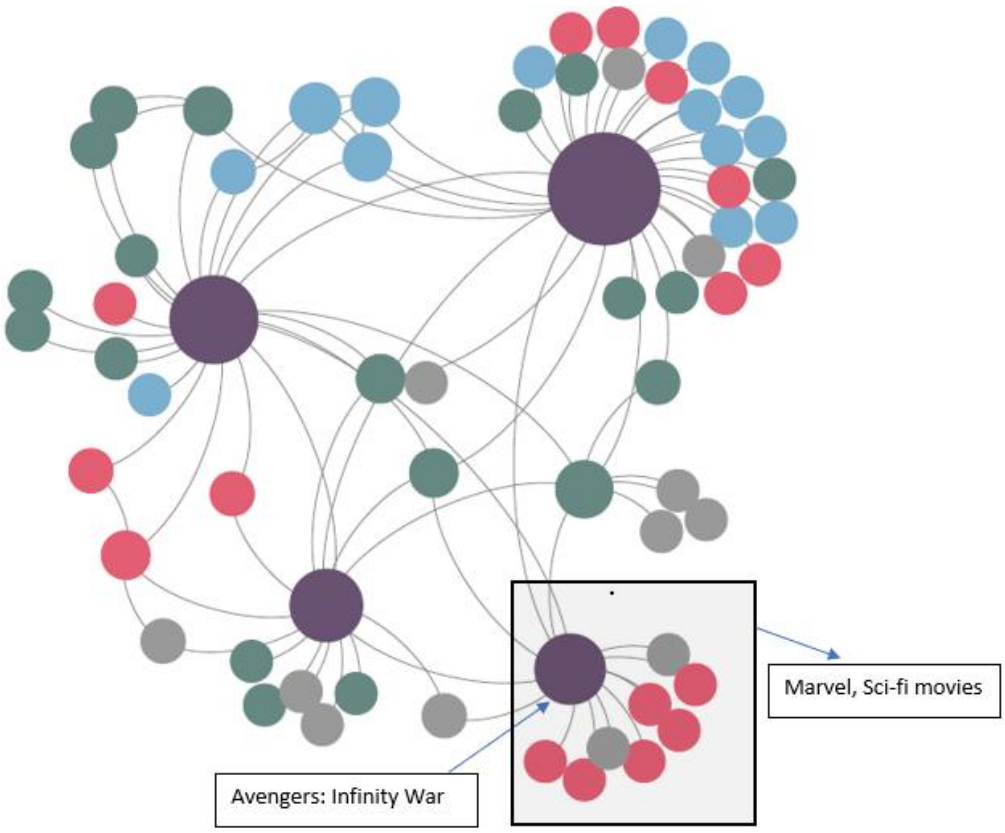


Figure 2: Movie Network

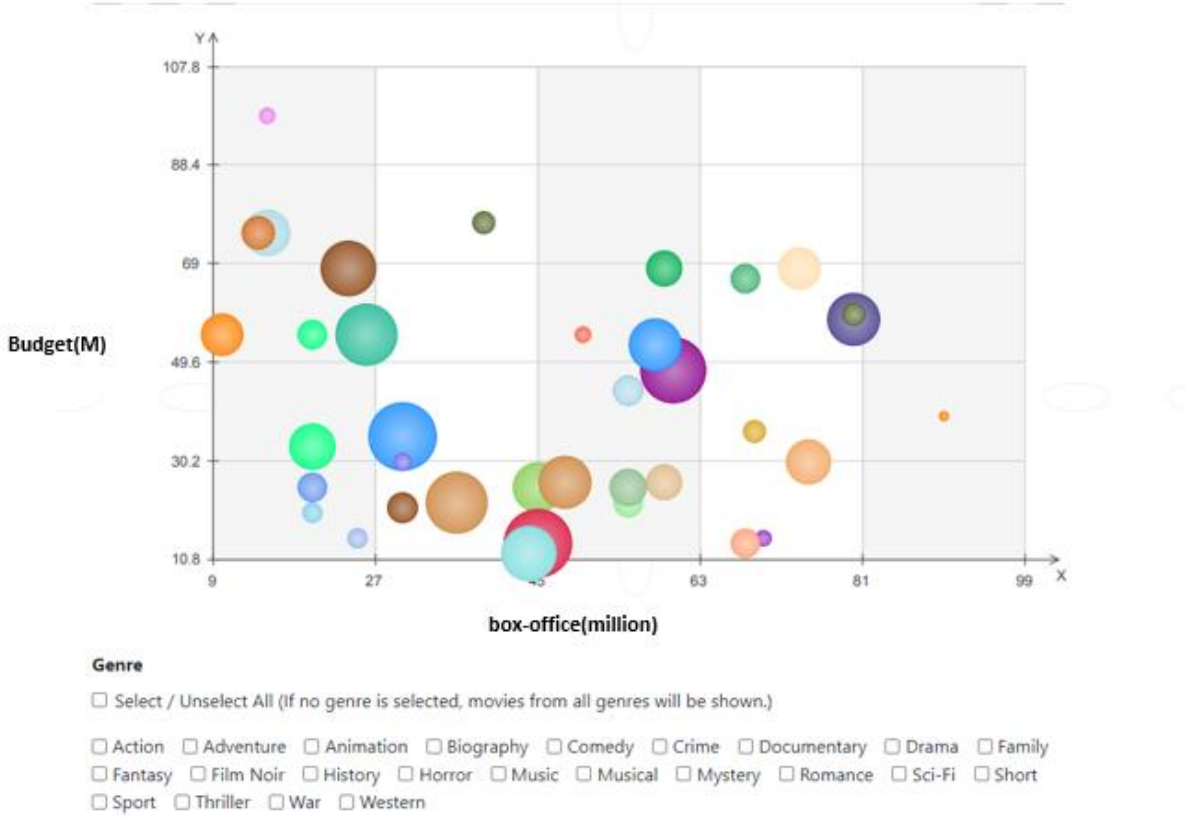
The nodes in network will be the picture of IMDB top 250 movies. Users can click on the specific node to see the detail descriptions for the movie.

What can improve: We can add the reason why the recommended movies relate to the searched movie, by showing the reasons when users move the cursor to the edge which connecting the movies.

Extra Visualizations:

Apart from having a recommendation module, we want to extra visualizations:

- Bubble chart which shows the relationship between the budget and income(box-office) for IMDB top 250 movies. We want to this bubble chart interactive; users can freely choose the genre of film they are interested in and explore the budget and box office of the film. Users can use this chart to find films that are "Hollywood blockbusters" with high costs and high returns, "historical legacies" that are not so popular at that time but with very high quality, or "cinematic miracles" that make a lot out of a small budget. And they can click on the bubble to see the details of that movie.



What to improve: We can add more filters to the chart. (E.g.: Company, Certificate, Publishing time)

- Interactive world map for the actors/directors.

More attention is sometimes paid to the actors or directors in a film than to the type of film. In this interactive world map, users can see the number of actors or directors from IMDB top 250 films in different countries (heatmap). Clicking on the country of interest will list the actors and directors (photo + name) and then clicking on their photo will show the films they have acted in or directed.

Tools used: D3.js, sigma.js (producing networks), React

Lecture references: D3.js, Graphs, More Interactive d3.js, Maps, Text viz