Lab 7 D: Interactive Visual Comparison

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Interactive Visual Comparison

Lab7 Desciption

This final programming assignment of the term is a more open-ended data visualization challenge. We have created a series of design specification for you to implement against (Lab 7 A,B,C,D). *You only need to complete one of these.* Take some time to look through each of them and decide.

Note that there is no starter code for this lab. You are welcome to use code from your previous assignments, or start from scratch. Some descriptions include resources or tips that may help you get started.

What to submit

1. You should implement the design specification below, including the visual interface and user interaction components.
2. Rename your `lab7` folder to `LastName_FirstName_lab7`
3. Zip up `LastName_FirstName_lab7` as `LastName_FirstName_lab7.zip` and submit it to Canvas.

Grading

Each lab7 submission will be graded against the design specification provided for the lab that you choose. This will consists of:

1. Correctly implementing the visual design elements of the lab. This includes: correct syling of the chart (or charts) used, correct data mappings between the data and the views, and use of axis labels and styling where applicable.
2. Correctly implementing the interactive functionality. This is specified through the design specification, and also the short video for each lab7 option that highlights how it should work. Both of these components are important. Depending on which lab7 you choose, these may be independent (e.g., filters), or very connected (e.g., scrollytelling).

Grading Notes specific for lab 7D

In addition to the user interaction and interface elements described below (and in the video), this lab places particular emphasis on filtering, selection, and details on demand aspects of the vis. Ensure that all the operations of filtering and axis assignment work as shown in the video and description below.

Which TAs to ask for help on this lab

To make feedback, guidance, and grading more consistent for lab7, we have assigned the following TAs as the primary people to ask for assistance on this lab:

- Claudia
- Paige

Dataset

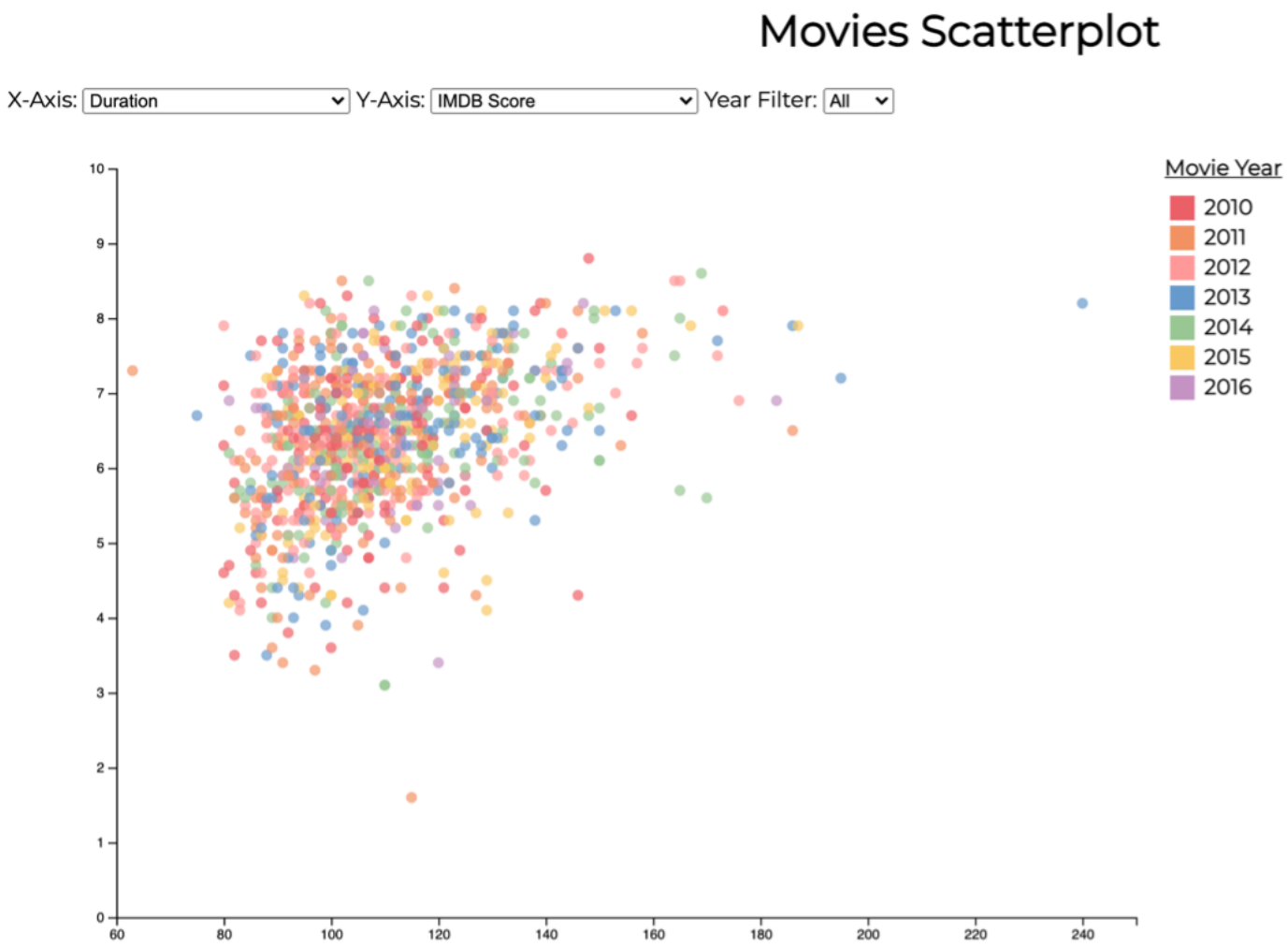
For this visualization, please use this dataset: Data

Design Specifications

This visualization will focus on filtering data and certain elements of your choosing. All parts of the visualization will take place on a single page and will include interactive elements. Note there are two sets of user interface and interaction specifications, which have to do with just the scatterplot, and the scatterplot along with the bar chart.

See the video clip below of a demo of the visual and interactive aspects of this lab: Video

The first part: Scatterplot



User Interface Elements

1. A title (can be of your choosing)
2. 2 dropdowns to choose the scale for the x-axis and y-axis – the only attributes needed for this are:
    i. Duration
    ii. Aspect Ratio
    iii. IMDb Score
    iv. Budget
    v. Gross
    vi. Number of Users for Reviews
    vii. Number of Faces in Poster
    viii. Number of Voted Users
3. 1 dropdown to filter the scatterplot data based on year. This will include the options:
    i. All
    ii. 2010
    iii. 2011
    iv. 2012

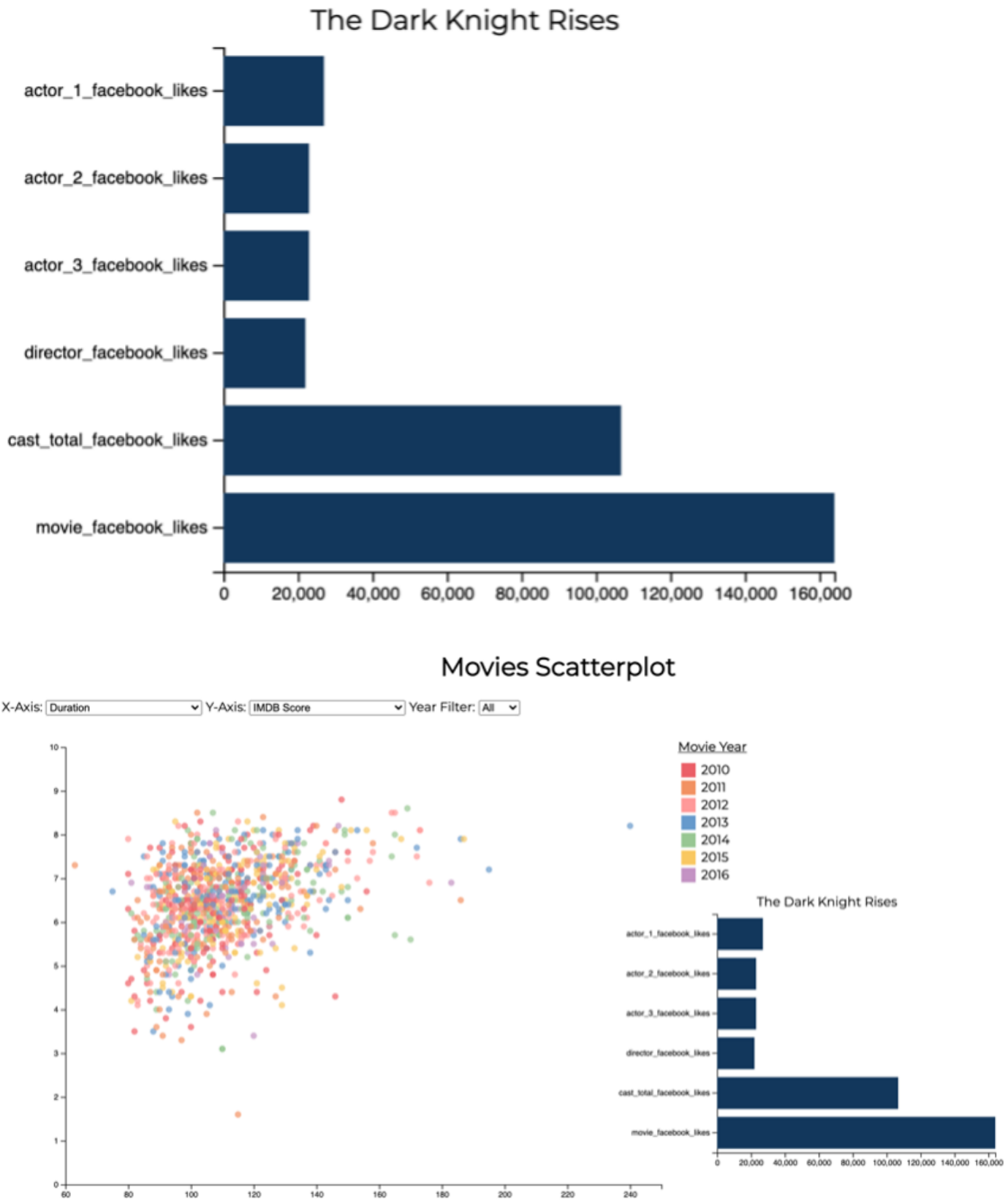
    v. 2013
    vi. 2014
    vii. 2015
    viii. 2016
4. A legend displaying which colors correspond to the movie year
5. Scatterplot data should be colored according to movie year

User Interactions

1. Changing x and y axis through dropdowns will redraw the scatterplot and axes with the correct axes and dynamically move the data
2. Changing the year(s) shown through the dropdown will display only the movies that are from a particular year or all years
3. Hovering on a data point within the scatterplot will display the name of the movie and the content rating

The final part

The last part of the visualization is including more details through a bar chart on interaction, creating a bar chart to go along with the scatterplot (shown below and in the demo video)



User Interface elements

1. A bar chart containing the data for number of Facebook likes

2. The title of the movie above the bar chart
3. On the x-axis, the type of Facebooks likes from the data – this will be the following columns from the data:
    i. actor_1_facebook_likes
    ii. actor_2_facebook_likes
    iii. actor_3_facebook_likes
    iv. director_facebook_likes
    v. cast_total_facebook_likes
    vi. movie_facebook_likes
4. The y-axis will be the range of likes for that movie
    i. The range will go from 0 to the max number of likes from the x-axis data
5. The sizes, colors of the circles / squarers OR font sizes and styles need not exactly match the demonstration. Try to match them as much as possible while maintaining aesthetic and design standards discussed throughout the course.

User Interactions

1. When a datapoint is clicked on the scatterplot, the bar chart of its Facebook likes will be shown to the side.
2. This bar chart will dynamically change based on the datapoint that is pressed
3. When a datapoint is double clicked, the bar chart will be removed for the UI view until a new datapoint is clicked.

Clone this wiki locally

```
https://github.gatech.edu/CS4460/Spring23-Labs-PUBLIC.wiki.git
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