

1 Introduction

I hope you find the information presented in this assignment interesting! It certainly is providing some fun between all the studies for me.

My Narrative Visualization can be found [here](https://palunel.github.io/CS498_HW4/) (https://palunel.github.io/CS498_HW4/). This is best viewed in Chrome since for some reason the tooltips are less responsive in Firefox at times.

I have used d3 and JavaScript to create this narrative along the lines taught in this course. While the code is not the cleanest I have written by a long shot, the functionality is clean and robust.

2 Messaging

As part of my journey through the MCS-DS program at UIUC, I keep detailed logs of the time I spend on each subject and each task. This assignment is a perfect way to present some of these insights. I present two main insights namely the total time spent per subject and on which tasks that time was spent for each of these subjects. The second insight is around how this time is distributed through a typical week and which subjects feature most on which weekdays.

3 Narrative Structure

I selected the Martini-glass structure as the most ideal way to convey my message. I start the narrative by giving some high-level findings and statistics around the course durations and averages before I end with two visualizations which allows the reader to explore through drilling down into some of the data to find more detail.

4 Visual Structure

I have used simple visualizations namely a pie chart and bar graphs that should be familiar to the reader. The pie chart is clear to understand in terms of what it represents, both through understanding the preceding text as well as the annotations. The pie chart provides suggestion that there is more information hidden behind the data slices and requests the reader to click through to see these. This is also the case for the second visualization. I have kept the annotations to a minimum with the bar charts to ensure the message provided by the varying heights of the individual bars are clearly communicated.

5 Scenes

Four different scenes are used in the narrative. The **first**, a pie chart showing the relative time I spent on each of the 6 subjects to date. This is a good entry point into the story hence it's prominent position. It provides the reader with an immediate sense of which are the more onerous topics with mouseover tooltips providing more information regarding the absolute duration for each subject. The reader is invited to click through a data point for more detail, leading to the **second** scene. This scene presents a bar graph with an appropriate title to show the reader detail about the specific course that she/he has clicked through. It also provides the reader a prompt on how to return to the first scene, making the navigation intuitive.

The **third** scene opens with a bar chart showing the distribution of time across a week. This scene succeeds the previous one since it presents a continuation of the narrative. The reader is encouraged to click through data points which takes them to an interesting **fourth** scene showing how weekdays were spent on the various subjects which rounds the narrative off neatly by establishing a link back to the first scene through the breakdown per subject.

6 Annotations

I used static annotations in each scene, allowing the reader to understand the context of the visualization. Common annotations in all the scenes are the headings which are context based. As the user moves from one scene to the next, the visualization heading changes to provide a clear description of what the reader is looking at.

In the first scene, the pie chart, I have opted to use abbreviations for each of the subject names to prevent the scene from becoming cluttered with long names. These abbreviations are clearly defined in the preceding text. I further added the proportional duration for each subject as an annotation to keep the reader's interest a bit longer. To allow the reader to confirm both the subject name and the exact time spent, I have added this information as mouseover tooltips.

On the bar charts, I have kept the annotations to the minimum, namely the title, and the axis labels, to allow the reader to visually take in the impact of the different heights of the bars. The annotations are sufficient to describe the data, but I have added mouseover tooltips to provide the reader with the exact durations if they are interested.

While there is no immediate suggestion that tooltip information is available, the suggestion to the reader in the sub-headings that more info is available on click-through, would naturally lead them to discover the tooltip information.

7 Parameters

In the first scene we move from an overview of distribution of time (state 1) to subject level detail of time spent on each task (state 2). The parameter that controls this is the subject name, e.g. Data Visualization or Distributed Systems etc. When selecting a pie chart slice representing a specific subject, this data point value is used to define the array that will be constructed and used for the second scene's visualization.

The third scene provides an overview of the spread of hours per weekday spent during the course of the program (state 1) after which we move to the detail per day for each of the subjects (state 2). The parameter here is the weekday, e.g. Monday, Tuesday etc. This data value is used to generate the data used in the following scene.

8 Triggers

The triggers used in this narrative are mouse clicks which provides the user generated events to transition between scenes. The affordances used are the sub-headings of each scene informing the user how to navigate from one scene to the next.