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**“Data as the Beginning of the Conversation, not the End”**

**“Data powers the experience, but stories of human beings are the drive.”**

*-Giorgia Lupi, Author and Co-creator of “Dear Data”*

**Introduction**

This project aims to challenge the impersonality and calculated efficiency that is regularly seen in the typical data visualizations, by telling a story through a much rawer, more humane data that consist of certain human characteristics and imperfections that we tend to avoid in the traditional data visualizations. This would lead to analysing a story from a much more empathetic perspective and sparks the curiosity of the viewers enough for them to connect to the data in a much more personal level. Over the course of eight weeks, I have collected data daily regarding certain daily habits of mine and the level of daily performance they produce in order to find correlation or certain patterns that lead to a day being overall successful or unsatisfactory from my own perspective. As a first-year university student, I had always known that the first term would have its challenges since it is a world away from life as a high school student. In my opinion the transition is a vital part of everyone’s university journey. Therefore, by visualizing and analysing this data in my own terms, my goal is to become more aware of my habits and their impact on my performance, and then plan the next steps in order to improve both my performance and overall mood for the upcoming term in order to align them with the goals and expectations I have for myself. I am hoping that this assignment could be guide and a relatable example to how data visualization can present such small yet significant series of information that could be interpreted in various ways based on the individual collecting the data and what they want to achieve from it.

**Method**

My approach to collecting the data was quite simple, yet I found it to be the best possible way to ensure that the data is being consistently collected. As a university student, I rely heavily on my planner in order to stay aware of my due dates and effectively manage my time. My digital planner this semester had a “habit tracking” section, which I found to be the best place for me to collect my data since it is on a file that I visit frequently throughout the day. I was successful in collecting the data consistently and ensuring there is no gaps withing the timeframe that I wanted to visualize.

The first step was to come up with the variables to be displayed, which I subdivided into two categories: My habits, and My performance. My habits include but are not limited to my screen time, my exercising habits and how many meals I consume in a day. My level of performance is determined by variables such as the amount of work I get done, how I spend my free time, and my overall mood for the day. Next, I made sure each of these variables were transformed into discrete categorial values that allowed my data visualization to be much easier and more efficient when interpreting the results. To keep the category sizes as small as possible, I used my self-knowledge of my routines to keep the ranges of data within the average amount I would usually perform at and what would be most relevant to the rest of the data. E.g: dividing the “mood” variable into three categories: Happy, Stressed, and Overwhelmed. Then, each category within the value was given a symbol so the process of collecting the data could be much easier since I could copy and paste the collection of symbols for the day, I developed under the legend section on my chart.

For the data visualization, I was heavily inspired by Giorgia Lupi’s TedTalk, “ How we can Find Ourselves in Data” and the collection of data-visualization postcards passed between her and Stefanie Posavec. Their ability to visualize data in such a creative and interesting manner greatly fascinated me. I was determined to make a visualization that is equally a creative presentation of the data I gathered using a collection of colours and symbols. Knowing early on that my symbols would most likely not look the same as the symbols I used to record the data, I had to ensure the displayed information complemented each other in a way that it was easier to visualise the data. I decided to draft my ideas on a paper and then use digital drawings for my final visualization of the data, using the software Procreate on IOS to my advantage to bring my idea to life on a virtual paper.

**Results**

**Table 1: The Variables Collected and their Categories**

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| --- | --- | --- |
| **Variable** | **How it’s measured** | **Categories** |
| **Screen Time** | (Estimation and using screen time setting on iPhone) | 1. Less than 1 hour 2. 1-2 hours 3. More than 3 hours |
| **Time doing work(performance)** | The difference between the start and finished time of task | 1. Less than 2 hours 2. 2-4 hours 3. More than 5 hours |
| **Type of work** | Recorded based on what the majority of the working time during the day was spent on | 1. Assignment 2. Test 3. Studying 4. Extracurricular 5. Job   \*\*IF THERE IS NO WORK, IT WILL BE BLANK\* |
| **Free time** | Recorded based on what the majority of the free time was spent on | 1. Hanging out with friends 2. Reading books 3. Watching movies   \*\*IF THERE IS NO FREE TIME, IT WILL BE BLANK\* |
| **Workout** | Based on whether there was any sort of formal physical activity done in the day | Yes  Or No |
| **Mood** | Based on daily check-ins with myself to record what I’m feeling | 1. Happy 2. Stressed 3. Overwhelmed |
| **Meals** | Based on how many times I sat down for a formal meal out of the 3 | Either 1  2  or 3 |

**Data Collection Process:**

**Table

Description automatically generated**

**Draft and coming up with Ideas:**

A white board with writing on it

Description automatically generated with low confidence

**Final Visualization**

A group of colorful butterflies

Description automatically generated

**Diagram

Description automatically generated**

**Analysing the Visualization:**

This visualization displays the set of data gathered daily over an 8-week timeframe. Each flower is a week while each petal is a day of that week, as outlined in the picture above. On each petal there are certain symbols and colours that represent all the variables collected. My approach to this visualization was to create something that is visually appealing as a whole and is also filled with detail, and I believe the flower design was able to achieve that goal with ease. While working on the draft, I had already decided on the flower design, but I was having some trouble with the symbols to use. My main concern was to keep the symbols simple, so they are easy to understand by any viewer that looks at the guide, while also being visually appealing. I was at first going to add colour to the symbols, but then, I chose to only use colour for the variables that required to be colour coded, and instead chose to keep everything else a simple black. In the end I am very happy with my decision as I believe that too much colour would have made the display look overcrowded and too complex to read. I believe the visualization achieved the creativeness and overall organization level I wanted it to have.

Analysing this visualization, can vary from person to person since the data includes many variables with different values of their own. You can narrow your focus on multiple aspects of the display and find different results between it all. Since I was both the illustrator of the display and the person the data was collected from, I adjusted the visualization so that it caters to what patterns I need to find and analyse for this data set. Therefore, I reached some expected and some more shocking results. For example, the days my assignments and projects were due, (Tuesdays and Fridays) were always very overwhelming for me unless I had done my some of the work ahead of time. The days that I exercised, I was usually in a good mood (never overwhelmed; mostly happy and sometimes stressed). Or that the days after the one I spent a lot of time on my phone, were mostly overwhelming (unless it was the weekends). One of the more shocking revelations was that my mood often increased after I spent time with my friends. Finally, my mood and eating habits have a strong correlation, meaning that most days I eat all three meals, I am in a better mood. I also discovered a lurking variable that affected my results greatly which was if I was staying home or on campus. When I was at home (Week 2,3, 7, 8) I tend to be more productive, and my mood was also a better average. I was also encouraged to eat three full meals with my family. Therefore, using the data, I learned so much more about myself and how my habits effect the way I perform academically and socially and impact my daily/weekly emotions.

**Reflection**

This project has been a very positive experience for me as it allowed me to discover more about myself through collecting data over a long period of time. This visualization is easily understandable by the viewers and very flexible in terms of the ways it could be analysed. It all depends on which portion of it you want to focus your attention to. Through the visualization I notice certain effects of my habits on my level of performance and basically how the two pairs of data correlate with each other. Even though it is evident that correlation is not equivalent to causation, since the data is about my own habits, I can still distinguish with patterns that are cause-and-effect or possible lurking variables that could have been affecting the results as I look over the data once more.

I believe one thing that I would love to change about this data set is to add even more variables to it, and even though I believe it would make the visualization a bit more cluttered and more complex, the more variables I add, the more accurate my data will be. However, it is important to mention that no matter how accurate data representations are, there will always be certain aspects in the process of data collecting and visualization that will create some inaccuracies and challenges that will affect the analysis and interpretation. In the process of data collecting for example, since I was also the person the data is being collected from, I know that certain biases may become involved in the way I would collect and store certain data, as well as when I’m describing and analysing it. However, I tried to keep my data collecting as unbiased as possible, since it is important to keep consistent and perform data collection regularly, as I have done every day for the past two months.

During the process of visualizing, it was mostly challenging to find a manner of visualizing the data that is both creative and demonstrate a certain level of complexity, while also ensuring that the data is not too difficult to analyze and interpret. I believe in the end I was successful in achieving a complex and creative visualization that allows the viewer to look past the data and into the story being told from a perspective of a freshman student and her process of navigating through the joys and the stress of her first term of university. I have also learned more about myself as a person through this visualization and feel more prepared for the start of the next semester. This project ultimately proved that sometimes data can be used to show patterns that are beyond the factual levels and could take a more personal and humane form instead.