Final Term Report - Liliana Mata

Introduction

Over the last few months, my daily habits changed in a way I didn't really expect. Two months ago, I suddenly had a lot of free time since I couldn't work or study, and I decided to open a new account in a game I had already been playing for a while. It was just something friendly and relaxing to pass the time, but it quickly turned into something bigger. I ended up making a small group of really good friends, and we all started spending a lot of time together, talking, learning about each other, and even sharing our hobbies.

I'm not really used to dedicating this much time and effort to friendships, especially online ones, but this group has encouraged each other to explore creative activities and learn new things. For me, that meant drawing and photography. For some of them it meant music or coloring apps. This kind of mutual encouragement became a real motivator for me to keep practicing my drawing skills and to challenge myself with photography.

Because my daily routines changed so much, I became curious about how this new social circle was affecting me. My first hypothesis for this project was actually very simple: "As the time I spend engaging with this new group of friends increases, the time I dedicate to my hobbies increases." It felt logical at the beginning, since being surrounded by creative people usually makes me want to create more too. But as the term progressed, I was also left with barely any time to do my own creative activities. Assignments and personal responsibilities started to overlap, and I realized my hypothesis might not match the reality of my day-to-day life anymore.

Fortunately, I had already been collecting a lot of information for each homework assignment throughout the quarter, where I was able to use all my data variables. That's why it made more sense for my final project to shift towards exploring the relationship between my emotional state in the morning and at night, and how this changed through the passing days. This new focus allowed me to still use all my stored data, while avoiding variables like drawing time that remained at zero on many days.

To collect the data, I tracked the total amount of time I spent per day socializing with my friends, how much time I spent drawing, how many pictures I captured, and my mood. I recorded my mood twice per day, once before noon and once after 7 pm. I didn't record the exact hour as it wasn't necessary for the kind of analysis I was doing, and I wasn't consistent with the times throughout it. The date alone was enough to group my emotions into morning and evening categories and to look for changes throughout the day.

Each metric had a purpose. Time with friends helped me understand the social impact of my new routine. Drawing and pictures represented my creative habits. Mood was the emotional indicator that could show possible correlations between all these activities. I

also considered external factors that could influence the results, such as how I felt at the beginning of the day or whether too much socializing took away time I should have used for studying or self-care. Finding balance between my professional life and this new social life was part of what I wanted to understand.

The most significant change I made throughout the term for this project was shifting my hypothesis to focus on how my mood changes in relation to the time I spent with friends and the passing of the day. At first, during the assignments, I didn't think I was going to use both moods at the same time or display them directly as visual data. But when the creative brief required us to explore different types of correlations, I realized this was the one I hadn't used yet, and it suddenly made sense to try it in a way that would be both fun and interesting to visualize.

This idea eventually led me to the final visualization: a string of lights representing my mood through color. When looking at examples of creative data visualizations, I knew I wanted to try something different. The upcoming holidays gave me the idea of lights, and since we had already used color to represent mood in previous assignments, the concept came together naturally. I can't really pinpoint why exactly this idea clicked, but once it appeared, I felt excited to try it. I did my best to represent it in a sketch and honestly didn't think I would be able to build it for real at the end of the term. Now I'm actually proud of how it turned out.

Overall, this project became a mix of personal curiosity, self-observation, and creative exploration. What started as a simple question about how friendships affect my creative habits turned into a deeper look at how my emotional state shifts throughout the day and how my environment influences it. This introduction is the starting point for explaining how I collected my data, how I analyzed it, and how I transformed it into a visual story of the last two months of my life.

Data
For this project, I collected data every single day starting on October 4th and didn't miss a single day. This was mostly thanks to the small system I built for myself. I kept my notebook on my desk in a very visible spot, which reminded me to fill in my mood entries by hand every morning before noon and every evening after 7 pm. Recording mood twice a day helped me compare how my emotional state shifted throughout the day, even if I didn't write down the exact hour. Since the time of day wasn't essential for my analysis and I wasn't always consistent, keeping only morning and night entries made the most sense.

The rest of my data was collected automatically through an app on my phone that tracks my daily usage. This made the process simple and reliable to translate the app's numbers into my dataset whenever I needed them. I chose to track four main categories: time spent socializing with my new group of friends, drawing time, pictures taken, and my mood. These were the activities that were changing the most in my daily routine, and I wanted to understand how they related to each other. Even on days when

some values were zero, I kept them in the dataset so it would represent my real habits throughout the entire term.

At the beginning of the quarter, this was the format I used for collecting my data: [link]

Later, I change to this method of data gathering, for me was easier to keep using this format that I created when I needed to use the information for one of the assignments, and I thought I would keep this structure for the rest of the term: [link]

However, during one of the classes, our instructor explained that if we want to work with dates in d3, we have two options: tell d3 to convert the format so it can read it, or rewrite our dates into a format that d3 already recognizes. For my workflow, it was easier to change the format myself instead of asking d3 to do the extra work. I translated all my dates into the format that d3 can naturally read, and this became the final version of my dataset.

Below is the complete dataset in its final format. It includes every day from October 4th to December 10th, without omissions.

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Alternative data visualization

One of the alternative ideas I considered for my final visualization was a **Christmas tree** made out of mood lights. This idea came before the string of lights that I actually implemented, and in many ways it shared the same core concept. Just like my final project, the visualization used colored lights to represent my mood, but in this version the lights would fall from top to bottom along the shape of a Christmas tree. Each row of lights would move from left to right, then right to left, and continue this pattern all the way down until reaching the base of the tree. The background would show the shape of a Christmas tree to give the visualization a more festive and playful feeling.

This sketch focused on the same elements as my final string of lights, and the functionality was almost identical. It would still display the passing of days, the two moods I recorded daily, and the correlations between them using color. The main difference is that this version has a more complex structure. Even though it was visually appealing and felt very fitting for the holiday season, it was definitely more challenging to implement.

When I first sketched it, I honestly couldn't even visualize where to start. I wasn't sure how I would code the lights falling in this back and forth pattern, or how to make the tree shape work with the data in a clear way. At the time, I didn't think I was going to choose

the creative option at all, so this idea felt a little too chaotic and ambitious for me. It also risked being more confusing than helpful because the zig-zag pattern of the lights could make it harder for someone to follow the data from day to day. I didn't want the visualization to become so decorative that it stopped being readable.

Now that I've actually completed the string of lights for my final project, the Christmas tree idea feels more plausible. I can even see ways to improve it. For example, instead of having the lights move back and forth, all the rows could flow in the same direction, just placed one below the other. That small change alone could solve most of the clarity issues and make the visualization easier to follow. It's funny to realize the solution was right there all along, but I just didn't see it at the time. Maybe one day I can try building this version too, even if not entirely through code.

Ultimately, I decided not to use this idea for my final project because the movement pattern made it confusing, and I didn't want to risk losing clarity. But I still think it was a strong concept, and it helped guide me toward the string of lights visualization that I'm proud of today.