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Color Visualization: Documenting the Brightness and Color of Our Data

The range of data presented covers such a wide breadth of ideas from each student. It stood out to me that many of the photos taken are not particularly beautiful or are very blurry and over or under exposed (which came into play in my visualization) as most students were concerned with documenting their lives but not with the actual visualization. Each student approached the collection differently with different rules for documentation, and some students took photos of the same object over and over and others of different subjects. When it came to my visualization, the photos which looked extremely similar returned similar results and the different ones drastically different results, which was interesting to analyze. Cleaning the data required holding all of the data sets to the same naming, dating, and tagging standards and compiling all of that information into one table to be read from.

I filtered all of the photos based on their brightness, from brightest to darkest. The brightness was pulled from the average color of the image and they were sorted based on it. I also wanted to represent the data in a way that was visually enticing so I used small rectangles colored by the average color of the image. On a more detailed scale, you can pull up each rectangle to see the actual image and view a histogram — the frequency distribution of the brightness — next to it. It is possible to see how many of the photos are overexposed or underexposed as I mentioned earlier and to interpret how the class approached the project from that. It is also possible to see the color range which is wide but muted; some images are vibrantly colored, like those of the blue notebook or the purple lock screen, while some are very muted

like the photos of paper or rooms. You can see the color of each student's life essentially, ranging from muted beiges in classrooms to the bright colors of their planner or water bottle.

Since I focused mainly on color and brightness, I was not able to use the dates or tags to allow the user to filter the data. In the future, I would love to work this functionality into the project in a way that does not slow down the program.

My approach to this project was mainly artistic as I wanted to focus on how the visualization looked and the colors and brightness of the photos. I began trying to put thumbnails of all of the photographs on the screen but it looked crowded and messy so I simplified it down to just rectangles so that the project would be visually appealing. Then I looked into the artistic makeup of each image by graphing its brightness. The whole experience is supposed to bring the user closer to the artistic side of photography and our students' lives.