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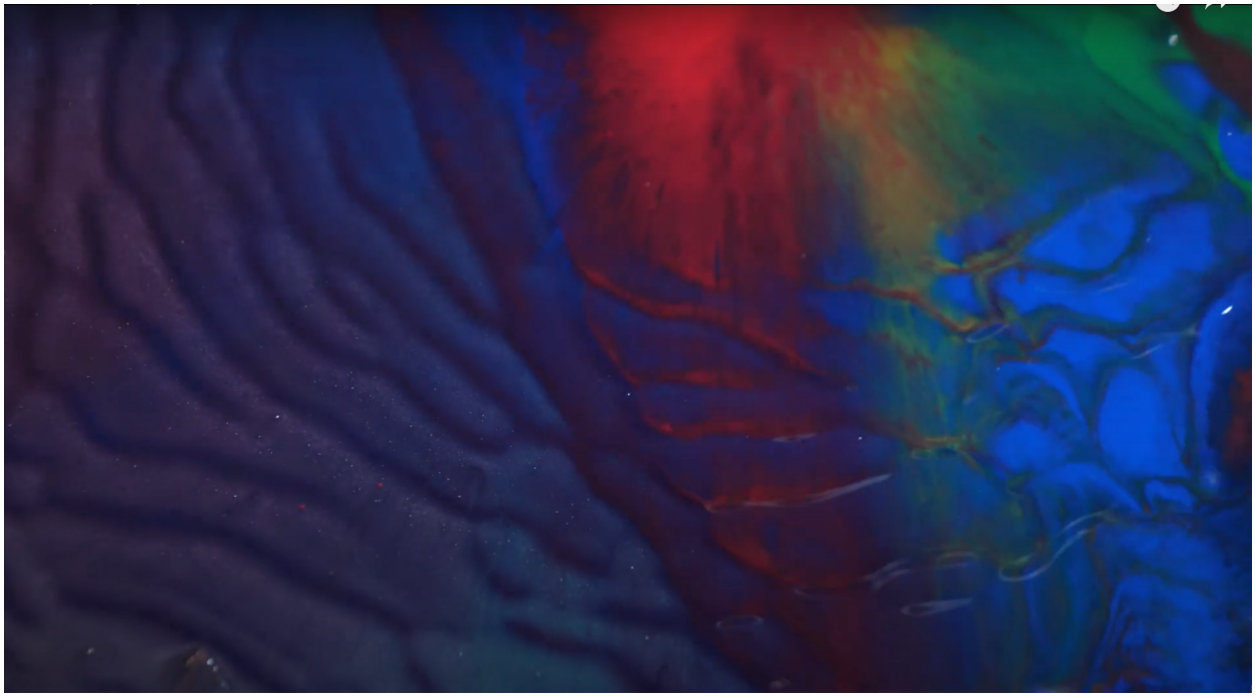
CINE 4200

Image/Video 4 Report



1. For my final flowvis project, I again wanted to create a video that demonstrated some sort of colorful flow. In my first flowvis project, I used white paint and blue India ink in a mixture. I wanted to do something similar, but with different materials to get different effects from it. I contemplated certain dyes and substances that could possibly work to create different flows, and eventually I settled on the idea of using Crayola Crayons. Crayons are cheaper than paint and dyes, and when melted the wax can mix and create interesting flows. I didn't know what to expect going into this project, but I actually ended up creating some very cool effects using these melted crayons and a certain melting set up. This picture is a still from one of my favorite parts of the video that I created for this last assignment.

2. In order to create flows using crayons, I first laid out an assortment of crayons on a baking sheet that I thought would go well together. I peeled the wrappers off all of the crayons, and broke them into smaller pieces. I then piled them up and put the baking tray into the oven for a short period of time. I had the oven at 400, and kept watching until the crayons had just melted. I didn't want to burn them or smoke up my entire house. I then moved the tray onto the table underneath my camera, which I had set up on a tripod in an overhead sort of angle. I recorded using 4k footage at 23.97 frames per second. My exposure varied as I was messing with the lighting often. I let my camera record, and then I began the process of manipulating the flow. For this I used a hair dryer which I held around 8 inches above the melted crayons. Since the crayons had already hardened since the oven, I hovered the hair dryer over them for a while to soften them up, and once they had melted I began moving and mixing the wax around with the air. This created some very interesting effects including mixing and fractal like particles that would separate from certain colors and mix into others. I also played around with a light above the set up a bit to create certain shadows and reflections off of the melted wax.

3. Crayola Crayons used paraffin wax. Paraffin wax consists of a mixture of 'solid straight-chain hydrocarbons.' The melting point of paraffin wax is around 120-150 degrees fahrenheit. Because paraffin wax has a low viscosity, I was able to create the interesting effects when blowing it with the hair dryer. When the wax is in its liquid state, it moves quickly and easily and is able to create flows similar to other low viscosity fluids. What I found interesting was the fractal type spreading of the colors. The color

pigment and the wax have different densities, and create separation once melted. When I blew on the mixture with the hot hair dryer, the pigment, which had a higher density, would be pushed up to the surface and create the crazy fractal effects.

4. Overall, I think this is the best flowvis that I was able to create this semester. The coloration along with the movement came out better than I could have imagined, and I would like to continue to play around with this technique in the future. I would like to see if different crayon company use different ingredients in their wax formulas, and maybe play around with a mixture of candles and crayons as well.

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Works Cited

1. “Paraffin Wax.” *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., https://www.britannica.com/science/paraffin-wax.
2. Christy. “The Science behind Melting Crayons - from Engineer to Sahm.” *From Engineer to Stay at Home Mom*, 26 Oct. 2018, https://www.fromengineertosahm.com/the-science-behind-melting-crayons-a-valentines-day-science-experiment/.
3.