

Creativity. Computing.

I have always seen computing as creative. The reason why I became interested in computers and software development in the first place, was because I wanted to create. The end goal of majoring in computer science has always been to acquire a skill set, which allows me to create something totally brand new. Though computing is creative, how it is taught in schools and how it is practiced in industry is not creative. Algorithms and efficiency are important. But, as students and then employees we rarely, if ever, are creative in the area of algorithms and efficiency. We merely implement what has been proven to be the best.

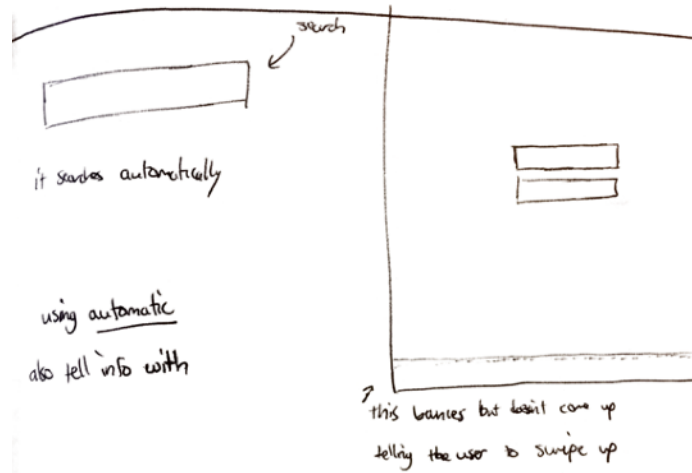
Creativity is about taking risks. Most computer science classes train students to build something with very clear specifications. Students are not being creative, there is no room for that. Building to specifications is not bad, but it is not creative. An assembly line is a perfect analogy. There is a lot of making and building, but no creativity. The creativity happened early, probably in a design studio. Computing is inherently creative, however how it is practiced by most, is not.

This class was particularly creative because it focused on the aspect and act of creation. It did not tell us what to do. Sometimes, it was even unclear what was being asked, or how to approach what was being asked. It caused thinking. Presenting a project in response to a prompt in which you are not even sure you understand, is scary. It is risky. It is creative.

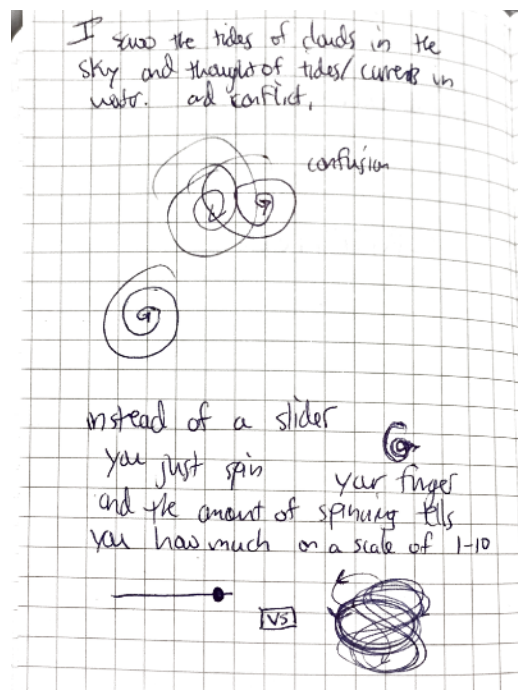
Ideation. Brainstorming.

On a plane ride back from Mexico over spring break, I started out the window and sketched in my journal. I thought a lot about how people could potentially interact with phones in a new way. This was an important brainstorming session.

At the time, I was thinking of our semester project, Nui, more in terms of creating different user interface elements, rather than creating a specific application. I was trying to pull inspiration from nature, and a side of nature which I rarely see, 36,000ft in the air.



initial ideas for UI elements



turbulence volume control idea from the plane

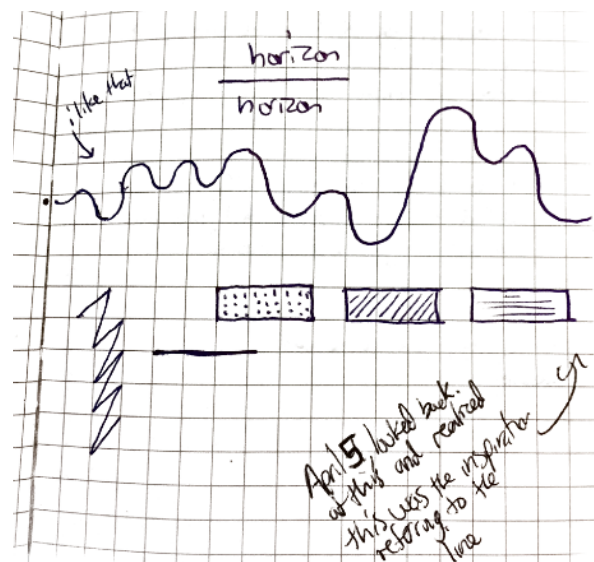
One particular idea came from looking at the clouds. I saw a tide pattern in the clouds and thought about dragging my finger through the clouds to form the "tides." I thought, "What if, instead of a slider, you just move your finger around on the screen, creating turbulence. Then, the amount of turbulence created corresponds to say, the level of volume."

Looking at the notes and sketches you can see a lot of skeuomorphism. Some skeuomorphism was drawing from nature, instead of product design. Though, where does any idea really come from? One could argue that everything was originally inspired by nature. Though, that is another discussion for another essay.

One glaring flaw (well, maybe flaw) with a lot of the ideas, is that they are not efficient in terms of space utilization on a screen. For example, with the turbulence/cloud idea, instead of a sliding bar, the interface would require a third up to the entire screen in order to implement. But, this idea was not a failure. It was a step.

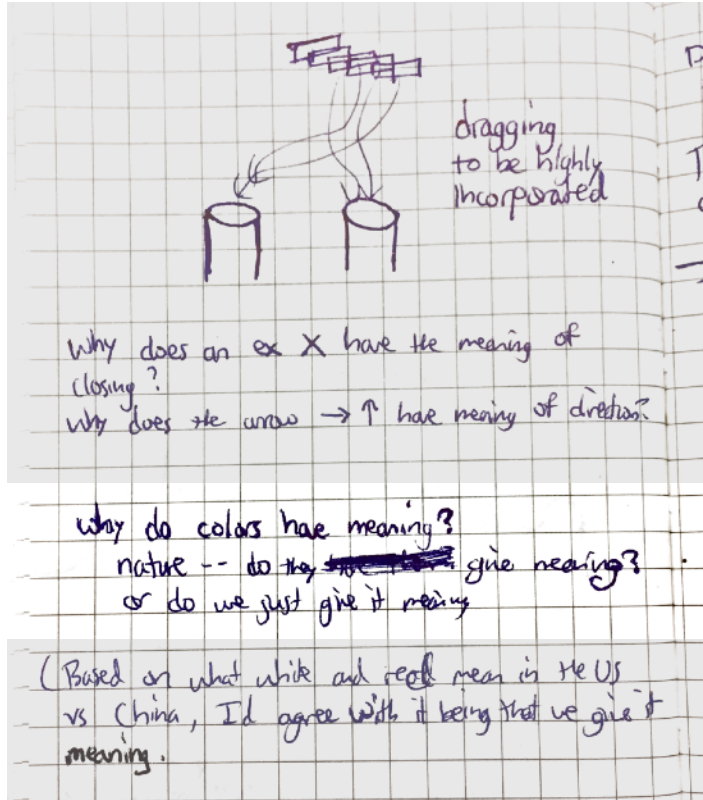
There were three specific ideas/thoughts which came from this brainstorm. But, it was not until after we had almost completed the semester project that the connection back to these ideas were made. The first idea was a smooth, curved line which was drawn, then annotated, "i like that." Inspiration for this curve came from a design for a stock app which I saw earlier in the year. I thought that the curved line was beautiful aesthetically.

The second idea was sketched below the curve. It was a set of boxes with different textures and patterns on the boxes. "Why use words when textures could be utilized?", I thought.

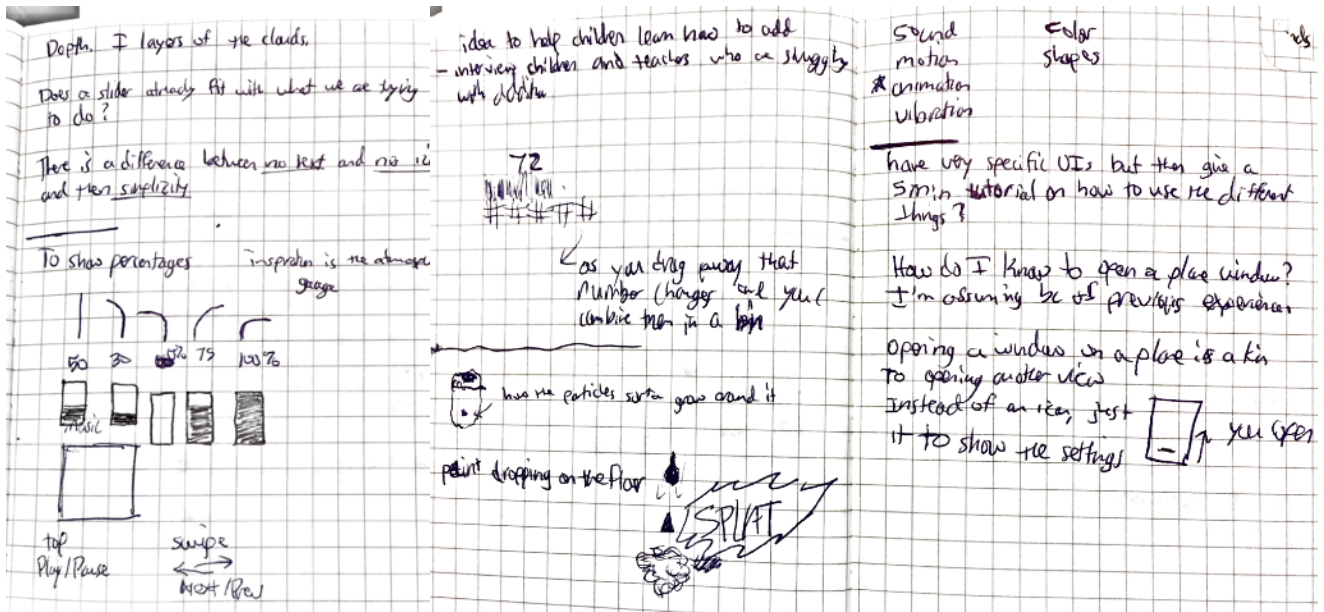


initial inspiration for the curve

Finally, on the very next page, I wrote: "Why do colors have meaning? nature - - do they give meaning? or do we just give it meaning". Because this 4 hour brainstorm was such a formative step in the semester project, the rest of the sketches are included below.



inspiring thoughts about the meaning of color

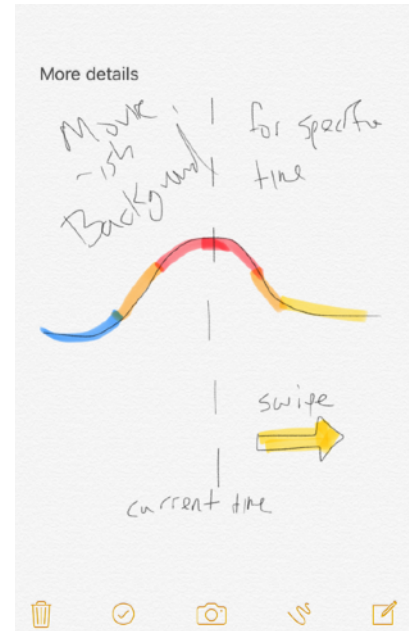
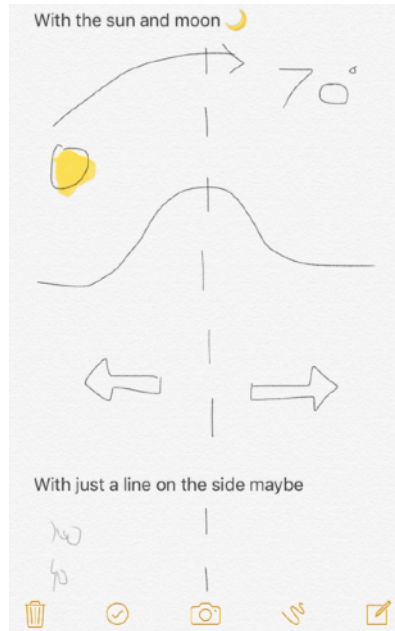
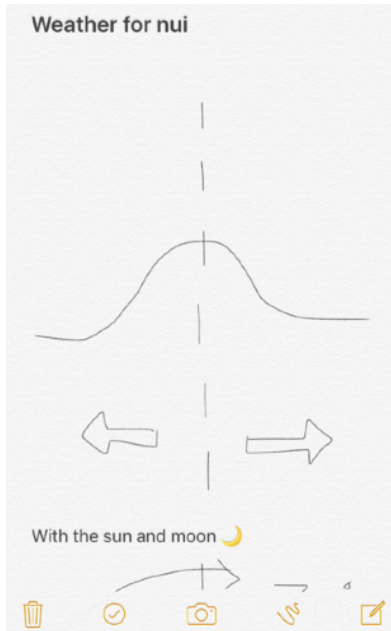


ideas, ideas, ideas

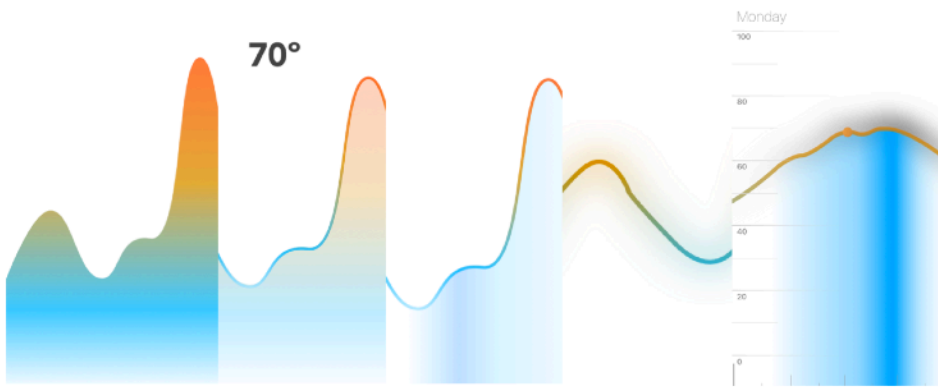
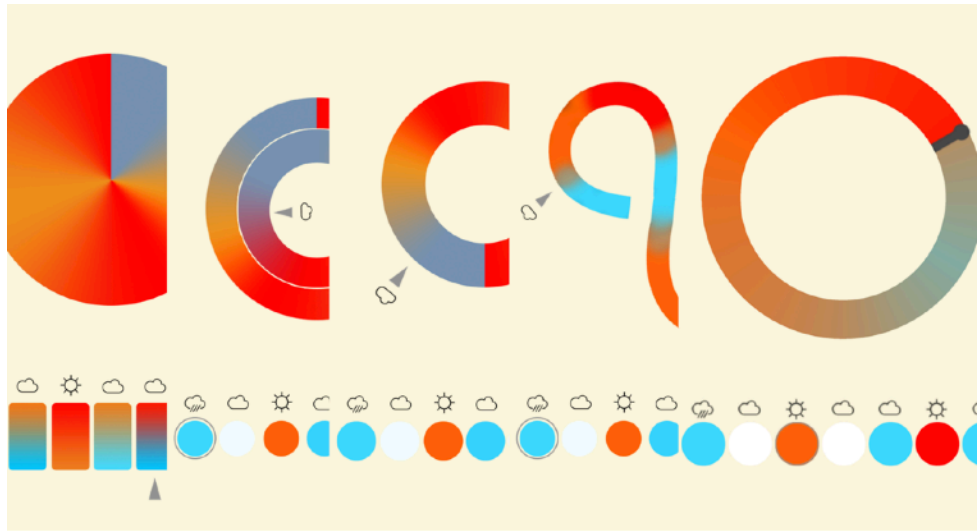
Project. Decisions. Creation.

Upon landing and getting back to Blacksburg, our team met up to set a game plan for the project. We came to the conclusion that due to the time constraints of the semester, we should focus on one particular application, namely weather, and ideate around the singular task of displaying the forecast. And, due to our constraint of “no text, no icons” weather was a particularly good choice.

We each left the meeting tasked with thinking of at least one new way to represent weather without text and icons. A few nights later while falling asleep, those 3 ideas from the plane, came together in my head. I grabbed my phone, and used the notes app to sketch the first iteration of the UI.



sketches from 1am



iterations of the mocks of both weather apps



final designs

Heart. Meaning.

There was another idea which my team thought about during the semester. A digital sun dial. My practical, design focused mind cringes a little bit while thinking about this idea. Let's be real, this idea is a bit absurd and not very practical. But it is important to allow your mind to go there and explore such ideas. While writing this



the shadow shows the
time

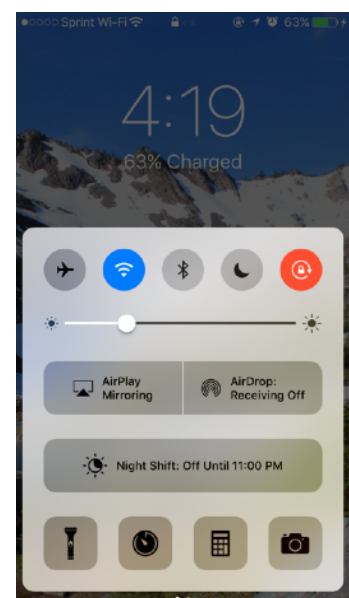
no sun is need to rise.
just the shadow moving
angle around.

initial sketch of the digital sun dial

instantly know that it is now eleven o'clock at night. They know the time purely from a slight change in contrast and color on the screen.

Honestly, this is the heart of what Nui was exploring. Sure, it was exploring a new future of user interfaces, but it was really exploring if there are better ways to represent

essay, I thought about an iPhone automatically turning on Night Shift at 11:00pm. Night Shift is similar to Flux on a computer; it the screen's contrast to appear more orange and thus make it easier on the human eye. If someone is using the phone at the moment between 10:59:59pm and 11:00:00pm, they



Night Shift on iOS 10

information. Are numbers, text, and icons the best ways to represent weather? The final project argues, "not always." Is a map the best way to learn how to navigate to a location? The final project argues, "not necessarily."

The questions our team asked are what I am most proud of this semester. We asked questions in which there are no right answers. We had the potential to fail. We took freaking risks. Our project was creative because of the chance for it to fail. We pushed the status quo on what is expected and what is possible.

Future.

Nui is a project which will continue to be worked on, at least by me. How it will be worked on is still to be determined. It may be directly, by programming and releasing fully functional apps. Or, it may live on in how the ideals I learned this semester influence my thinking. This project broke me out of the mindset of creating user interfaces merely by pulling from a set collection of UI elements. Now, when thinking about building a UI, I wonder what is the best way to show information. Instead of immediately running to a panel of UI elements, I stop and think and sketch and think some more. The most common pattern, or the most available method might actually not be the best way.

