

Diana Edvi

Professor Pippin Barr

CART253B: Creative Computation

December 24, 2024

Post-Reflective Essay

Over the course of the semester, I learned a lot about myself and about my skills in terms of programming and creative expression. Looking back, there is a lot that I can reflect on and be proud of. I achieved more than I thought I could, and I had a wonderful time doing it. In this short essay, I will go over what I learned and struggled with, my relationship with creativity, and my goals for the future.

To start off, I want to look at how I felt about the course at the beginning of the semester. I distinctly remember feeling very on-the-fence about my own capabilities. I had taken some introductory programming courses before, but this was my first time ever touching JavaScript and I wondered if I would struggle with it. To my surprise, (and I'm sure anyone experienced in coding could have told me this), the fundamentals I learned in other languages easily transferred over to JavaScript. I already knew about conditionals, loops, arrays, and so on. All I needed to do was learn the proper syntax and try to meet any conventions as best I could. After the first week or two of classes, my worry about not being able to keep up dissipated, and I was able to implement the concepts talked about with ease. I used loops to access arrays, included loads of conditional checks to get my game objects to behave accordingly, and I even made my own a .json file. Learning about the .json files was especially fun because it was completely new to me. I remember during the Mod Jam, I felt overwhelmed by the amount of data cluttering up my .js files. When I was introduced to .json files a week after the Mod Jam submission deadline, I got this "aha!" feeling, like all of my problems were solved. Naturally, I immediately wanted to make my own, so I used one in the Variation Jam (it was very satisfying).

Other than brushing up my general JavaScript skills, I also familiarized myself with the p5 library. At the beginning of the semester, I had to look up a lot of the methods in the p5 reference, especially for things like the parameters for the many methods. Some examples of these include `text()`, `ellipse()`, `image()`, and so on, but by the end of the semester, I barely even needed to keep the p5 reference that tab open. Furthermore, for every project, I decided to challenge myself to familiarize myself with a specific concept or method. So for example, for the second assignment, I worked on handling images and interactions with them, and in the third assignment, I played with time functions a lot, like `millis()`, `Date.now`, and `SetTimeout()`. These helped me deepen my understanding of JavaScript and the p5 library, and looking back, it's cool to see how much I have learned since day 1. Also, from doing multiple projects essentially from

scratch, I learned about the importance of having a good programming design. In some scripts, I truly suffered because my original plan for some tasks was not well thought-out. I ended up having lots of duplicate code, which then caused a lot of bugs and headaches. As the semester went on, I tried to put more and more effort into creating readable code that was easily expandable. This of course was not perfect by the end, but I can definitely see some improvements by comparing my first project with my third.

Up until now, I had mainly worked on console programs (with the exception of a few projects done in Unity). Any time I had to make some form of UI, I had to manually draw it with character keys. This class allowed me to expand my creative coding practice by giving me the tools to draw whatever I want by using the p5 library. It was my first time ever working with a library like this, and it significantly expanded the possibilities of what kind of interactive programs I could do with only code and no external programs. For example, if I wanted to draw a heart onto the screen (Art Jam), I could just... do that, using two circles and a square, thanks to p5. If I wanted to create a drag-and-drop mechanic (Mod Jam), I could do that using my big beefy brain and some helpful p5 methods. It wasn't always easy though, especially when it came to irregular shapes or getting game objects to move exactly the way I wanted. I remember trying to make a parallax background way back in the Art Jam, and struggling to get it working properly. In the Variation Jam, I wanted my game's tempo to increase over time until the player could no longer keep up, but the Timeout functions didn't take very well to frame-by-frame decrements, and I ended up having to leave the majority of that out in favour of maintaining my sanity. Overall, learning how to "draw" with code, or manipulate images through code, opened up a lot of doors in terms of creative expression. I am no longer limited to ugly console programs. I can now do, pretty much, any kind of interactive art that I want.

In all honestly, my biggest struggle this semester was not about the coding itself. Like I said, I surprised myself at being able to implement most of what I wanted without any external help. My biggest struggle was about being creative and letting go of the technical part of the projects. For example, for the very first assignment, I wasn't even thinking about being "fun" with my work. I was looking at the base criteria for the assignment and focused solely on meeting those as soon as possible, and I left the creativity part until later (surprise, surprise, it was much harder to change the game to make it "fun" when I did all the coding first). I realized after looking at other students' assignments that it's ok to breathe a bit before jumping into an assignment and that it's worth it to brainstorm a bit before jumping in. That's why I was super happy with my mod jam assignment. It is by far my favourite creation of the semester; I just think it's super cute. So, I would categorize my learning journey throughout this semester as more than just learning how to code in JavaScript and how to put what is in my head onto the screen. I also learned the importance of figuring out how I want my players to *feel*. I gave that

my best shot in the Variation Jam with the voiceover audio, although my humour/storytelling skills are very much still a work in progress.

Regarding my future as a creative coder, I feel like this course really helped me take my first steps along that path. Like I mentioned earlier, I haven't done much creative coding up until now. Being a Computer Science student, most of my assignments offered little room for creativity and self-expression. The experience I gained in the last few months has provided me with some great insight on how to balance creative expression and technique, and more specifically, not to invest too many resources into only one of those things while neglecting the other. Considering I would ultimately like to work in the game development industry, my plans for the future include just making as many small projects as possible. I know that in order to get good in the art world, you simply need to practice, practice, practice. So that is what I would like to do. I find that the scope of the assignments that I did in this semester is very manageable, so in the future I would like to continue making small games like these in order to learn about game design and hone my programming skills even further. I'm looking forward to the day where I can make a game that people actually find enjoyable to the point where they want to play it over and over again.

Overall, I had a fantastic time in this course this semester. I feel satisfied with myself knowing that even though I was technically more advanced than most of the students in the class, I didn't let that stop me from challenging myself. I still learned a lot and plan to use my newfound knowledge in the coming years. Thanks for the great experience, it's been real.