

## CART 253 – Post Reflection

Willow Casinghino

Cart 253 has been a rewarding class and has reignited a lot of my passion for programming and digital art. At the start of the course my programming skills existed but were rusty. Almost all code I'd written in the past couple of years was based on a visual language, all from classes in the Intermedia program. MaxMSP is the center of their programming classes. I enjoyed it but ultimately found it too cumbersome for my needs. Its strengths lie in audio production- which I hope to revisit it for- but it's just too unreliable and niche for a lot of general programming applications. I also used TouchDesigner to make interactive installations. I enjoyed Touch more. It felt more dynamic and modern, better for designing the kind of visuals I was interested in at the time. But both are alike in that they're visual node-based languages. I think something about that level of abstraction makes them less enjoyable for me to use. It felt cumbersome to think of how I would structure my code- cause and effect actually felt harder to determine at times. And, because it's such an abstract approach to programming, it often means learning their proprietary approach to data types and what each type of block does.

It's worth noting that I did have previous experience with programming from high school, having taken an entry level computer science course. It taught the basics of Java which- as dry as it may have been at times- left me with a solid understanding of programming basics and an ability to think through the structure of code line by line. It turns out that that last skill is something that I enjoy a lot. As much as I think of myself as a fairly visual thinker programming in written code has ended up feeling a lot more intuitive to me. Naturally it varies person to person, but I feel much more ownership over my code when it is written. I think this played into my experience with the class, and my fresh excitement for programming.

Enough of my Java class stuck with me that when I started CART 253 I was able to get up to speed pretty quickly, especially with a language as friendly as p5 Javascript. I was already familiar with many of the basic data types and logic operations, and the classes served as perfect exercises to stretch my programming muscles while picking up new skills along the way. In terms of specific concepts, I got much better at maintaining modular and well-commented code (partially thanks to Javascript's forgiving variable instantiation), I learned to host and maintain my code through git, and I learned p5's libraries. One of the biggest things that helped me in this class was also debugging skills. Getting help in class

and then being able to follow the same process at home was essential. However, I feel that the brunt of my growth has been in the novel application of these skills.

In my Java class I found the cause and effect of writing code satisfying, but it was always about data management. Interactions never moved out of the terminal. 253 offered a space to apply these skills in a way I always wanted to. In that sense I think the biggest development of my skills was in applying programming for the purpose of creating interactive media. Functions, objects, arrays, booleans, etc. became tools to construct and refine an experience. p5's approachable and intuitive functions for managing visuals made exploring its capabilities rewarding. Arrays went from a way to hold a customer's balance to the RGBA values of pixels. Functions existed to make interactions and ideas come to life. 253 encouraged this by giving smaller goals with visuals and interaction that would inherently play into the larger, more open-ended projects. These open-ended projects were key. I took what I learned from your advice and the making learning materials and tried to just follow what I was interested in.

Having spent two years studying in Intermedia I'm often drawn to more conceptual projects. I think it's important to be aware of your medium and incorporate its presence in your work (beyond it simply BEING the medium). I like technological arts a lot and think there is still so much untapped potential with interactive art. Narratives can be expressed in so many ways with programming. The transmutability of every conceivable type of information in digital spaces is one thing that makes programming so exciting to me. Interactive art's ability to provide frameworks for new social experiences also excites me. Beyond this I find it hard to define my creative practice. I think I'm still in an exploratory period (one which shouldn't ever end, but I hope my interests and knowledge do refine over time).

I do think I satisfied my interests fairly well in this class. As much as I struggled with time management, I'm still proud of the work I did. Every time I had a spark of an idea I was surprised by how well I was able to fulfil the idea then build from it. Besides the occasional error code, it was rare that I would have to look up anything outside of the p5 reference and the class notes. It's totally valid to look up solutions and learn from what you see, but I think it's important to develop your own thinking process when possible. P5's accessibility makes this really doable for an entry-level programmer. I feel much more capable of coming up with an idea, building it out and developing it as a code, and researching what I don't know in order to understand and implement it. Two major ideas that I loved exploring were audio reactivity and per-pixel image calculations. P5's ability to break an image down into discrete pixel data to work with was a perfect challenge for me to try. Meanwhile p5's

sound library offers great tools to analyze audio; it allowed me to work more directly with audio to create a specific aesthetic experience with 3D models.

In turn, some concepts I hope to explore in my future as a creative coder are: 3D. I have some experience modeling and animating, but I rarely take my work out of Blender. P5's 3D capabilities intrigue me. I've only scratched the surface of what's possible. Relatedly, my interest in images and image manipulation translates well into writing shaders. I know that's GLSL, but p5 supports using shaders and I think it would be a fantastic way to finally learn them and put their power to use. In terms of using code for social experiences I think that's split in two. I want to make multi-user/player software, as well as more audio reactive visualizers that I can use for performance. Many of my projects have been experiments to test out these ideas. I want to take these skills and code and start applying them in more cohesive and polished applications.

I really enjoyed CART 253 and it has absolutely expanded my thinking with coding. I feel excited to build more complex projects, and the explorative space offered in this course is a real boon for making programming feel exciting. I switched from IMCA to CART specifically for its stronger focus on technical exploration and this class what really convinced me it was the right choice. (IMCA is more open ended. This is a double-edged sword in terms of the skills you learn. Though, frankly, as a studio program the discussion is much richer in IMCA. I've only taken 200-level CART courses thus far, could get better.)