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Reflective Essay

At the beginning of this course, I would say that my programming knowledge in Javascript was at a quite fundamental level, having taken CART 253 the previous semester. Regardless of my prior background, I feel as though this semester was more exciting concerning learning and exploring the world of creative coding. In the initial weeks, I revisited the basics of programming with JavaScript and p5.js. I also got to refresh my understanding of variables, functions, loops, and other fundamental concepts. This period served as a foundation for the more advanced topics I would later encounter.

One of the highlights of the course was delving into creative applications of programming, such as speech input and output using p5.speech. This introduced a new dimension to my coding practice, allowing us to explore the intersection of technology and human expression. I found this particularly exciting because it opened up possibilities for interactive games like the Simon says program that I made, where the user could engage with the program through voice commands.

The exploration of machine learning models with ml5 was another fascinating aspect of the course. While initially daunting, diving into AI programming offered a glimpse into the future of creative coding. The ability to train models and incorporate them into my projects expanded the scope of what I could create. Facemesh and HandPose/Gesture were particularly interesting and could have been implemented in cool ways like the Rock, Paper, Scissors program I made using HandPose. I see potential in using AI to generate dynamic visualizations or interactive storytelling experiences, where the narrative adapts based on user input.

The weeks dedicated to game engines with Phaser 3 provided me insight into the world of game development. Learning about game mechanics, physics, and user interfaces challenged me to think more critically about user experience and engagement. Although this is something that I feel as though would require a lot more practice on my end with maybe watching more tutorials and experimenting with different interfaces, I found Phaser to be the most complicated section of the semester. While I may not pursue game development as my primary focus, the principles and techniques learned are applicable across various creative coding projects. It was interesting to get introduced to it.

We also slightly touched on JavaScript and its integration with webpages, I realized the power of web technologies in reaching a wider audience. The ability to create dynamic and interactive web content opened up opportunities for sharing my creations with the world. Whether it's through a personal website, social media, or online galleries, programming empowers me to showcase my creativity in accessible and engaging ways. (Maybe this can been a topic that I focus more on in the future).

Reflecting on my journey through this course, I recognize the growth in my programming skills and creative mindset. What seemed intimidating at the beginning now

feels within reach (although hard work and dedication is very important), thanks to the guidance and support of Pippin and classmates (through Discord). I've gained confidence in experimenting with new ideas and pushing the boundaries of what I can achieve through code.

Looking ahead, I'm excited about exploring big ideas that will be supported by my increasing knowledge of programming. One area I'm particularly interested in delving into further is the utilization of JSON (JavaScript Object Notation) for interactive storytelling and data visualization. JSON offers a powerful and flexible way to structure and store data. Its lightweight format and ease of readability make it an ideal choice for organizing complex datasets, which is essential for the kind of interactive storytelling experiences I envision creating. With JSON, I can efficiently store and manage various elements of a narrative, such as character profiles, plot points, and branching storylines, etc… I found a few courses on Udemy that can help teach me more intricacies of JSON. Moreover, JSON's compatibility with web technologies allows for seamless integration into interactive web applications. By leveraging JavaScript work with JSON data, I can dynamically generate visualizations that respond to user input or narrative progression. For example, I could create interactive maps that reveal different aspects of a story as the user explores different locations or timelines. (This is something that I hope to expand on in the near future)

Another avenue I'm keen to explore is generative art, where algorithms and randomness are used to create visually stunning compositions. This aligns with my interest in exploring the balance between control and spontaneity in the creative process. I envision creating dynamic artworks that evolve, responding to external stimuli or user interactions. I've installed StableDiffusion on my computer to help me with this locally and its something that I'm very keen on tinkering with. Although StableDiffusion not really related to programming and moreso Generative AI, I'm looking into ways how to implement Javascript into Generative Ai and found a program called Hugging Face which I can integrate AI art generation into my JavaScript web projects. Hugging Face can provide me with access to a variety of text-to-image models, allowing me to experiment with different styles and techniques to create dynamic and engaging visuals. So it's also something that I am looking into.

In conclusion, my journey through this course has been a transformative experience in understanding programming as a creative form of expression. From revisiting the basics to exploring advanced concepts like machine learning and game development, I've gained valuable insights that will shape my future creative endeavours. With each new skill acquired, I feel more empowered to push the boundaries of what's possible and to create meaningful experiences through code.