Final Self-Assessment: Cory Gish

For this project, my main objective was to produce the hardware and software for the OBD II adapter device for the OBD II port within a vehicle. In order to complete this, I utilized a Bluetooth RN-42 module, SNT1110 chip for multiprotocol OBD to UART interpreter, and a SAMD21 microcontroller. The main protocol focus for the STN1110 chip was CAN bus (ISO 15765) as it is mandatory in US cars since 2008 and is used today in the majority of cars. However, this chip also gives support for ISO 14230-4, ISO 9141-2, SAE J1850 VPW, and SAE J1850 PWM. Within this OBD II adapter device, the microcontroller relays information from the STN1110 chip to the Bluetooth chip through UART. Once the data has been sent over to Bluetooth, it can then send it over to the Raspberry Pi.

For Metaverse Maintenance, I got to learn about different technologies and apply concepts learned throughout college. As I always want to try to find new ways of improving a project, being able to fully focus on the hardware and software for the OBD reader was greatly beneficial for implementing a successful OBD reader device. Due to the variety of challenges our project was tasked with, my teammate, Ryan, was able to develop the system for creating data visualization and a VR environment for additional visualization of vehicle data. Being able to work on a team with a diverse set of skills allows us to focus on our strengths and gave us experience on working with a multidisciplinary team.

Our group has been able to fully complete the tasks we set earlier in the project. We researched, designed, prototyped, and implemented our system for communication between a vehicle and our data visualization tool, Losant. Our project sponsor, Prodigy, and their partner,

Blues Wireless, were valuable throughout our project as they provided us with the tools and resources necessary for our project to succeed.

Without the committed contributions of both Ryan and myself, this project would not have been possible. I believe our multidisciplinary skills and frequent communication led to our success in this project. Being able to frequently meet and discuss updates on both sides of the project was efficient as we were able to work both of our parts of the project together in this method. Additionally, any issues brought up could be discussed here and we were able to split tasks appropriately between ourselves so we could complete this project on time. Overall, I believe that Ryan and I were able to create a well-engineered product that met our expectations.