**Senior Design Team Contract – Metaverse Maintenance**

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The purpose of this document is to outline the general expectations and logistics of team meetings and communications, as well as establishing a base project focus and role assignment for each team member. To best understand the project focus, the team has created a fundamental problem statement to guide the research, design, and development of project attributes. The problem statement is as follows: Design a system that performs real-time analysis of automotive attributes and concisely displays this analysis in a cross-platform experience. While this problem statement is quite broad, a multitude of use cases, and user stories can be developed to create a holistic image of the requirements necessary to implement a successful system and user-experience.

Due to the complexity and multitude of functionality that is required of the system discussed above, the team has broken the system into three major categories. The first category is the automotive-device interface. This area of focus will include designing hardware components to gather real-time automotive data points to be analyzed throughout the system. Moreover, the team has discussed the inclusion of a human machine interface (HMI) that provides an operator with a dashboard of real-time attribute values. The second major category is internet of things (IOT) capability. For this system to provide an immersive cross-platform experience, it is necessary that automotive data can be accessed through a variety of interfaces. Well-designed IOT connectivity will limit the latency of data retrieval and provide a real-time experience across any platform. The last category of focus for this project is user interfaces. The project team would like to implement a virtual reality (VR) experience to provide users with three-dimensional data visualization of automotive attributes. However, since VR could become a barrier to entry of an average user, the team will also provide a browser-based application to allow the system to be viewed on any network capable device.

To complete this project in a timely manner, it will be essential for the project team to have a consistent schedule of communication. The project team will meet face-to-face in an on-campus meeting every Wednesday from 4:30-5:30 for the remainder of the academic semester. The project team will meet with the project advisor on a biweekly basis at the convenience of the advisor. The general breakdown of roles will be that Cory will focus on the automotive-device interface, and Ryan will focus on user interfaces. IOT capabilities and documentation will be split evenly between the team members.