ECE Senior Design Weekly Report

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Week’s Task: Perform research and analysis on the different possible techniques to achieve controlled levitation, as well as potential technologies to be used for gesture recognition and processing. As the repository manager, a secondary task was to create and organize the team’s repositories.

Results: A thorough analysis and lengthy team discussion regarding the possible methods for controlled levitation of the globe has lead us to lean towards a rotation-less alternative where an image would be projected unto or into a statically levitating acrylic globe. One very important advantage of this alternative would be resources shifting away from the physical aspect of the project into implementing some of the other capabilities. As for gesture recognition, many technologies could be used to implement this feature, but it is also important to take into account the possibility of utilizing another interactive device, such as a smartphone to control the globe. A simple example would be using an IR (Infrared) transmitter dongle that attaches to the smartphone via the earphone jack or the charging port and building an app to transmit different gestures through infrared. This method could prove to be more financially approachable. Finally, my secondary task of creating and organizing the repositories has been completed. A Google Drive and a GitHub repository have been created and are now open for the team’s use.