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The Super High Intensity Team (working title)

**Topic Area:** Computer Vision, Augmented Reality, Task-Focused AR, Process Assistive AR, Autonomous Vehicles

**Problem Statement:** It is easy to become distracted, confused, or overwhelmed when completing a complicated, instruction-based task. This applies to scientific procedures, manufacturing and assembly, or even cooking in a home. One area of particular interest is a busy intersection. People, and now even Cars and robots, can have a hard time taking in the sheer amount of information that a single intersection may provide in motion.

**Proposed Solution:** Using computer vision, and a deep neural network, we plan to develop an image segmentation algorithm. If possible we would like to provide this visually through augmented reality. Using an augmented reality headset/ mobile device all kinds of information can be displayed as AR visualizations that may be useful to the user. Even more so this information could be very useful to user-to-computer interaction (HCI). Once the system is completely integrated, it will open up the possibility to explore specialized applications such as navigation assistance, self driving decision making, etc.

**Data:** There is much precedent in industry for this use of AR. Our current plan is to use one of the many datasets available for StreetView and cater our possess-assistance with tasks in that domain. It is unclear whether we will pursue the autonomous driving route or something adjacent.

**Timeline:**

**Our project timeline can be found through on this** [**Google Sheet**](https://docs.google.com/spreadsheets/d/1A_YkHBk8hbi3Atj1EglC9z22_VA-bpEfyW2F47COpHA/edit?usp=sharing)