Blurb:

In the beginning, the team wanted to test out using the Qualcomm Dragon board, since it was new hardware that would be more challenging, than using an Arduino, for example. Utilizing the Qualcomm Dragon board, our team developed a group of LEDs that turn on when the circuit is connected using a touch sensor. With this functionality in mind, our team thought about different projects, that could use the Qualcomm Dragon board and LEDs. The idea we decided on was a way to help color blind individuals, with traffic situations that would require them to be able to differentiate the three different colors. Additionally, since red and green color blindness is one of the most common out of all the colors, it was something we thought would be useful if developed more. Our technical idea was to use computer vision, employing the usage of OpenCV Python and a webcam, to detect the changes of the LED colors and display the color using text. With this project, we aim to assist color blind people, and make the traffic issues not as risky.