Fusion of Visual and Near Infrared Images in Embedded Platforms
ECE496 Senior Thesis
Problem Statement

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1 Problem Statement

Several image processing algorithms and tasks are researched and designed on general purpose computers with a large amount of computational resources. However, these algorithms often need to be implemented on embedded systems with less available resources, such as IoT and wearable devices.

This research will focus on implementing image fusion algorithms of visible color spectrum (VIS) images and Near Infrared (NIR) Images.

I will research different ways of implementing these algorithms onto a microcontroller. More specifically, I plan to use 2 small cameras simultaneously that would connect to a microcontroller to achieve this. In addition, I plan to research the efficiency of each algorithm implemented to make them less computationally taxing to the microcontroller.