



## Venu Gande: Implementation of Object Detection methods on GPU

### Description

The goal of this project is to implement robust and efficient algorithms to detect and classify objects in real still images on an embedded platform. Embedded platform are very resource limited devices; most importantly computing power, memory, energy consumption, etc. As image processing algorithms are computationally intensive, it is difficult to perform classification tasks in real-time on those platforms.

Recent trends are to perform computing intensive computations on high performance graphic processing units (GPU) using general purpose GPU mechanisms such as NVIDIA's CUDA framework. The availability of low-energy GPUs for general purpose processing allows to integrate those devices in embedded platforms.

This work investigates in the capabilities and utility of using GPGPU in embedded platforms. Thus, different image processing algorithms are implemented and compared regarding different parameters such as runtime, speedup, performance gain and resource utilization of the algorithms on and off CUDA using different images.

### Advisor

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