Image Processing Project Blog
Entry 1 - 29/03/2017
Evan Morgan - C12503487

Introduction

The classification of vehicles via image processing is the chosen topic for our group project. The group includes myself, Sam Evans and Dylan Delaney. The project's aim is to identify what type of vehicle is in an image through image processing via Matlab.

Team Discussion

Sam and Dylan had already made some progress towards using adaptive thresholding to isolate the cars from the background. It was found that images with dynamic backgrounds were easier to isolate than the images with static backgrounds. This is more than likely due to the fact that when a car is moving, the focus is on the car, causing a motion blur in the background.

It was suggested that if thresholding could be used to isolate the boundary of the car, we could then use morphology to close the loop, then skeletonize the image and search for the largest loop, having the largest loop, we could then begin identifying its shape using hit-and-miss transforms. It was then agreed that more research should be put into current methods of classification and how we could adapt them for our own uses. That is my current task and it will be updated in the next blog entry.

Code Sharing

It was agreed that in order to effectively share our Matlab code in this project, GitHub should be used. Sam and Dylan were new to GitHub and I have had previous experience with it in a professional environment, so 1-2 hours was used getting everyone set up and guiding them in how to use it. However now that we have gotten over the initial setup, code sharing and incrementally building towards the final product will be much easier. Our code so far and our shared documents can be seen here: https://github.com/Signo-Alaris/Classification/

Goal for Next Blog

Going forward, my goal is to research further into vehicle classification papers and methods.