This is the Introduction file to the ECE5584 Homework 1 Submission, Fall 2019 for Matthew Kayrish. This submission package contains the following files.

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| **This File** | This is the Table of Contents for the submission. |
| **ECE5584\_HW1.pptx** | This is the final presentation summarizing the homework 1 results. |
| **Hw\_1Part\_1.m** | This is the top level executable for Part 1 of HW1. It will perform all activities associated with loading CIFAR-10 data and parsing, processing, and performing image retrieval. |
| **parseIMS.m** | This function will parse the raw data from it’s standard format into the HSV format. |
| **plotHistograms.m** | This script will plot the individual histograms for H, S, and V values of the images. It will also display the image. |
| **callDemosaic.m** | Script for calling the ‘mhcDemosaic.m’ function. |
| **mhcDemosaic.m** | Function that performs the Malvar-He-Cutler Algorithm for image reconstruction from the Bayer Pattern. |
| **setPattern.m** | Functions that will generate the Bayer Pattern of the image from the original input image. |
| **padImage.m** | Function that pads the original input image in order to maintain image edge and corner integrity once image processing is initiated. |
| **loadFilters.m** | Function that loads the various filters used by the MHC Algorithm. |
| **Flag.jpg** | American Flag image used for the MHC Algorithm. |
| **GoldenGate.jpg** | Golden Gate Bridge image used for the MHC Algorithm. |