German University in Cairo
Faculty of Media Engineering and Technology
Spring 2020

DMET 1002 – Advanced Media Lab

Final Project

Compressing images is widely used to decrease the size of images and utilize your computer storage. In this project, you are asked to create a system that:

1- Implements Huffman coding, truncated Huffman coding and Huffman Shift coding.

2- Takes the input image and apply to it one of the prior mentioned compression techniques based on the input initial letter (ex. H for Huffman, T for Truncated and S for Huffman Shift) that you take with the image.

Meaning that your function should take:

1- The image before compression
2- The initial letter of the algorithm to be applied as a compression technique

3- Compresses the image and return the dictionary of the compressed image.

4- Get the compression ratio between using the normal binary representation of the image and the used compression technique.

In this project, you are asked, as teams of maximum 3 students to perform the prior tasks

The output should be the image after compression along with the dictionary to be used in decompression.

You will find attached a folder containing the images.

You will need to implement any functions for image enhancement.
You are not allowed to use any of the already implemented functions in MATLAB.

Deliverables:

You are to deliver your code along with all the results for the given images.

Note: Please write comments to explain the algorithm of your code.

The **deadline for submission is on Monday, May 18 at mid-night.**

The submission will be on the course's email **dmet10022020@gmail.com**.

Please submit the files with the following name "FinalProject_ID1_ID2_ID3" and the email's subject is to be the same.

Good luck ☺