

COMPUTER VISION

ASSIGNMENT-1

OBJECTIVE

To Design and Develop a User-Friendly interactive Interface for performing various techniques of image Enhancement and Restoration on the image.

INTRODUCTION

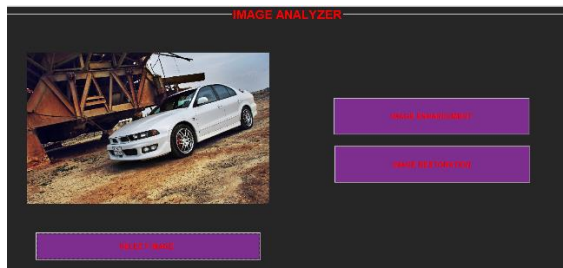
I created a User-Friendly GUI (Graphical User Interface) using MATLAB tools like GUIDE. With the help of this GUI a user can upload an image of his choice from the computer and perform various functions on the image such as changing brightness, contrast, applying various types of filters and adding noises for restoration. I have created multiple GUIs for different processes that include Point Processing, Sharpening, Enhancement and Restoration and each one of them is interlinked to each other by using MATLAB tools for better user experience.

WORKING

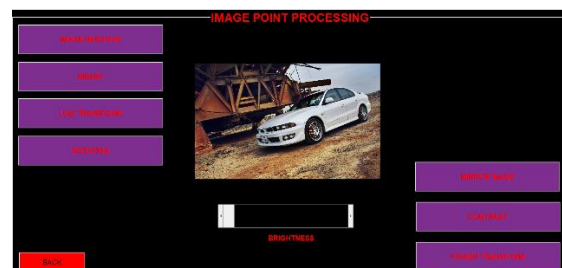
The UI first starts by asking user to browse the image he wants to manipulate and then select either Enhancement or Restoration. If the user chooses Restoration, he has variety of Noises to add to the image such as Gaussian, Poisson, Speckle and many more and also has option to return to home window. If the user chooses Enhancement, he can further decide whether he wants to sharpen the image or process it. Both of them have variety of functions which he can apply to image and can return back from either to enhancement. He can also scroll for controlling the brightness of image in Point Processing and he needs to load the image only once on the home window. The UI will automatically upload image on other screens.

DESIGN

HOME SCREEN



POINT PROCESSING



SUMMARY

Designing a GUI and its Development starting from basic structure and embedding various functions into each button helped me to learn a lot. I finally got a glimpse of how these things work on tech giants like Instagram and Snapchat.