Florida Polytechnic University

CAP 4410 **Assignment 1**

Due Date: Monday, January 27, 2025, by 11:59 pm. In your assignment, please be sure to explain all mentioned points CLEARLY. This is an individual assignment. ***Submit your assignment in electronic format (only on canvas, do not email me). I am attaching a template of the report.***

Submit a report about your work for this assignment by the due date (as mentioned above). Solutions and results need to be presented in the report.

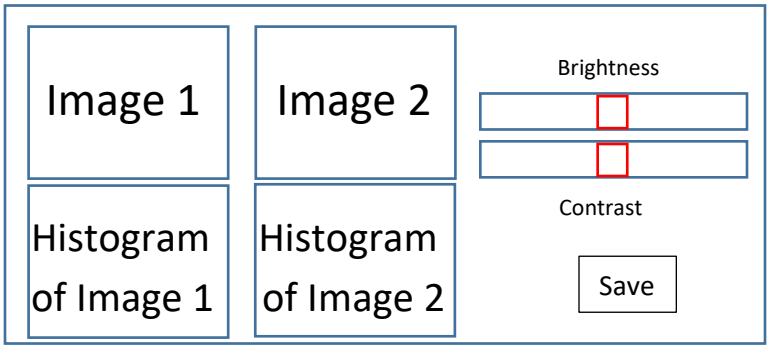
This assignment requires you to implement knowledge of image loading. Adjusting, Preview and Saving.

Tasks

In short, for this assignment you do the following:

1) Load the given image on the screen. 10 points
2) Draw the histogram of that image on the screen. 10 points
3) Load the same given image as preview on the screen. 10 points
4) Draw the histogram of the same preview image on the screen. 10 points
5) Add 2 scroll bars, one for increase or decrease the brightness, other for increase or decrease the contrast. 20 points
6) Add the save functionality, either by button or by pressing any key or combination of keys. 10 points
7) When we reload the code, it shows in both windows the image with new settings. 10 points
8) Format of report. 05 points
9) Clarity of explanation. 15 points

So final output will be like this:



- You may use OpenCV or any tool other than MATLAB to achieve some basic operations such as file I/O or histogram mapping.

Report

To finalize your report,

- Start with identifying yourself and provide a title for your report,
- Describe your work,
- Include samples of outputs of your program in this report possibly have references included,
- Do not copy from somewhere without proper citation and reference but aim at writing in your own words.
- Submit sources and reports (in pdf format) in one zip file.

Helpful Commands(its not necessary that you have to use these commands)

imread(), subplots(), imshow(), hist(), slider(), update_image(), save(),

Wish You the Best of Luck