ADIPCV-2022

ASSIGNMENT-2

Consider an image of a Patachitra drawn by an artist in the village of Raghurajpur, near Puri. Develop an interactive tool extracting the painting and performing following image and graphics operations. The tool should have the following features. Please note that each of them may be performed through manual user interaction, semiautomated or automated algorithms as you choose.
(i) Foreground extraction of painting in an image such that only the pixels belonging to the artwork have their original values and the rest become zero (black). 10
(ii) Identifying corner points, and boundary edges. 10
(iii) Computing homography matrix for mapping the paintings to a target rectangle of the aspect ratio of the same as the original image, and finally computing and displaying the transformed image. 30
(iv) Performing affine rectification on the painting by providing its transformation matrix and also displaying the rectified image. 30

Consider the images provided with this assignment, namely PataChitraPuri_1.jpg and PataChitraPuri_2.jpg. Provide experimental results on those two images in your report.

GUI and visualisation: 10
Report:10

Bonus: Quality of solution (10)

You may implement your programs in C++-OpenCV/MATLAB/ Python with necessary user's interfaces and visualization of your results and input.
Please provide a documentation for compiling and running the programs in a README file. The whole project should be submitted in a single tar or zip file.