

Image Processing

Abstract

The project “Image Processing” is developed for processing of images in order to improve the quality of the images. The intension of project is applying new look to an existing image. The images are taken to new look by adjusting brightness and contrast, changing the color. The system displays the coordinates of the pixel where mouse points to the image. It provides user friendly GUI so that people are attracted. When the beauty of the picture is lost, the user need not to worry as he/she can get his/her old picture and also can improve on it. It has the following features.

- *Opening an image file*
- *Applying Mean filter, Median filter*
- *Adjusting brightness and contrast*
- *Converting an image to negative form and vice-versa*
- *Applying RGB color system to the image*
- *Rotating an image*
- *Saving the edited image*

Proposed System

This entire system needs to be performed from a single GUI tool. The user should feel convenient when he interacts with the system. The system should provide RGB color system, so that user can apply colors to the image.

The proposed system should have the following modules

- 1. File operations*
- 2. Editing the image*
- 3. RGB color system*
- 4. Coordinates and Rotation*
- 5. Filters*

Scope of the System

The project "Image Processing is a desktop application. The scope of the project is limited to that system only where it exists. The system does not allow us to cut the some picture on the image.

Module Description

File Operations

The image files are opened to modify and they can be saved after modified. The module allows us to get the image from an existing directory. We can apply save or save as operations to the image.

Editing the image

The main intension of this project is to editing or modifying an existing image. It allows us to increase or decrease the brightness or contrast of the image. If we wish, we can add an image on some displayed image.

RGB Color System

This module allows the user to customize the colors to the image. The user feels very happy, when he navigates the scroll and the colors are dynamically applied to the image. The user has so many number of choices to choose the different colors.

Coordinates and Rotation

This module allows the user to know the position of the cursor where he points on the image.

The image can be rotated in clock-wise.

Filters

Filters are used to improve the quality of the picture.

- *Mean Filter*
- *Median Filter*

Technologies to be used

- ***Programming Language: Java***
- ***Operating System: Windows XP/2000/2003, LINUX, Solaris***
- ***IDEs: Eclipse with My Eclipse plugins/Net Beans/RAD***

Hardware requirements

- *Processor* ----- *Intel P-IV based system*
- *RAM Capacity* ----- *128MB*
- *Hard Disk* ----- *20GB*
- *CD-ROM Drive* ----- *32 HZ*
- KEYBOARD* ----- *108 Standard*