Project Mini Adobe

MARCH, 2021

—

By Niladri Das

Overview

This project solves some basic image problems like Image Rotation, Image Resizing, Image Compression, Normal Image Conversion, Raw Image Conversion and Creating timelapse.

Reason Behind the Project

One of my hobbies is photography. For this reason I need to create timelapse and hyperlapse frequently.

Initially, I faced some difficulties with the heavy image processing softwares (like, Adobe After Effect, Adobe Premiere Pro etc.) in my low specification PC (Dell inspiron 15).

So, I created this project as an alternative.

Now, I found that this project is useful for many other low end PC users.

Goals

1. It helps to automate the process of image conversion, compression, resizing, rotation and creating timelapse.

2. This project is an alternative of heavy image processing application to apply the above functionalities on PC's with low specification.

Specifications

Modules/Tools/Libraries:

os => To access the operating system. I.e, to operate with directories, operate with files etc.

glob => A glob is a string of literal and/or wildcard characters used to match file paths. Globbing is the act of locating files on a filesystem using one or more globs. ... When an array of globs is used, they are matched in array order - especially useful for negative globs.

rawpy => It also contains some extra functionality for finding and repairing hot/dead pixels.

Imageio => Imageio is a Python library that provides an easy interface to read and write a wide range of image data, including animated images, volumetric data, and scientific formats.

Image => From PIL (i.e., pillow) module : Python Imaging Library is a free and open-source additional library for the Python programming language that adds support for opening, manipulating, and saving many different image file formats.

cv2 => OpenCV module : It is a high level image processing library. It is used for Computer Vision works mainly.

- All the libraries or modules are cross platform modules.

Paths:

The path of the required file and directories are initialized in the program.

Basic Structures and Workflow:

```
#1:
#THE FUNCTION TO ROTATE AN IMAGE :
def rotateImage(name,angle):
    #code
#2:
#THE FUNCTION TO CONVERT AN IMAGE :
def convertImage(name):
    #code
#3:
#THE FUNCTION TO CONVERT RAW IMAGES TO JPG IMAGES :
def convertRawImages():
    #code
#4:
# THE FUNCTION CREATE AN TIMELAPSE :
def CreateTimelapse(name):
    #code
```

```
# MENU:
    print("""
    CHOOSE AN OPTION:
    1. ROTATE AN IMAGE
    2. CONVERTED AN IMAGE
    3. CONVERT RAW IMAGES
    4. CREATE TIMELAPSE
    5. BREAK
    """)
```