


Can't Put My Thumb on What's Wrong with These Pictures

Due Apr 15 by 11:59pm **Points** 100 **Submitting** a file upload
Available until Apr 28 at 11:59pm

This assignment was locked Apr 28 at 11:59pm.

Can't Put My Finger on What's Wrong with These Pictures

For this lab, you are going to be creating a script that will batch process [300 Images](https://lms.neumont.edu/courses/3349977/files/220458930/download?download_frd=1)  (https://lms.neumont.edu/courses/3349977/files/220458930/download?download_frd=1) into thumbnails using PIL (Python Image Library)

IMPORTANT: If you cannot download the 300 images from the above link, you can download these image by doing the following:

1. Click the Files link to the left. (this will open the available files)
2. Find the image.zip file in the list
3. Download the images.zip and unzip the images folder in your project

Requirements:

- Have the script identify all of the files in the images directory using `os.listdir()`
- In one pass, do all of the following to each image:
 - Convert from jpg to png format
 - Crop the edges to be a square (height and width should match)
 - Rotate so the faces of the people are oriented correctly, there should be no black edges showing
 - Make the new thumbnails size 75x75 pixels
 - Convert to gray scales
 - Save the results in a directory called 'new_images' at the same directory level as 'images'
 - Rename the files to be sequentially numbered with a prefix of 'pic' and always having four digits (e.g. pic0001.png, pic0002.png, ... pic0010.png, ... pic0284.png)
- Running the script from python should automatically process all 300 images in the 'images' directory and save the new thumbnails in the 'new_images' directory.

- If the 'new_images' destination path does not exist then create it.

Submission Requirements:

- Only submit the Python script. Do not submit the image files or the folders.

Additional Resources:

- PILLOW information: <https://pillow.readthedocs.io/en/3.0.x/handbook/tutorial.html>
(<https://pillow.readthedocs.io/en/stable/handbook/index.html>)
- os.listdir() information: <https://www.geeksforgeeks.org/rename-multiple-files-using-python/>
(<https://www.geeksforgeeks.org/rename-multiple-files-using-python/>)

Some Rubric (2)

Criteria	Ratings		Pts
Have the script identify all of the files in the images directory using <code>os.listdir()</code>	10 pts Full Marks	0 pts No Marks	10 pts
Convert from jpg to png format	10 pts Full Marks	0 pts No Marks	10 pts
Crop the edges to be a square (height and width should match)	10 pts Full Marks	0 pts No Marks	10 pts
Rotate so the faces of the people are oriented correctly, there should be no black edges showing	10 pts Full Marks	0 pts No Marks	10 pts
Make the new thumbnails 75x75 pixels	10 pts Full Marks	0 pts No Marks	10 pts
Convert to gray scale	10 pts Full Marks	0 pts No Marks	10 pts
Save the results in a directory called 'new_images' at the same directory level as 'images'	10 pts Full Marks	0 pts No Marks	10 pts
Rename the files to be sequentially numbered with a prefix of 'pic' and always having four digits (e.g. pic0001.png, pic0002.png, ... pic0010.png, ... pic0284.png)	10 pts Full Marks	0 pts No Marks	10 pts
Running the script from python should automatically process all 300 images in the 'images' directory and save the new thumbnails in the 'new_images' directory.	20 pts Full Marks	0 pts No Marks	20 pts

Criteria	Ratings	Pts
Total Points: 100		