Charge to observer

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Welcome to the psychophysical experiment on Saturation Enhancement image quality assessment. The total duration of the experiment is about 20-30 minutes. Please read this document carefully before you start.

1 Introduction

This experiments consists of only one section. You will need to evaluate 70 pairs of images.

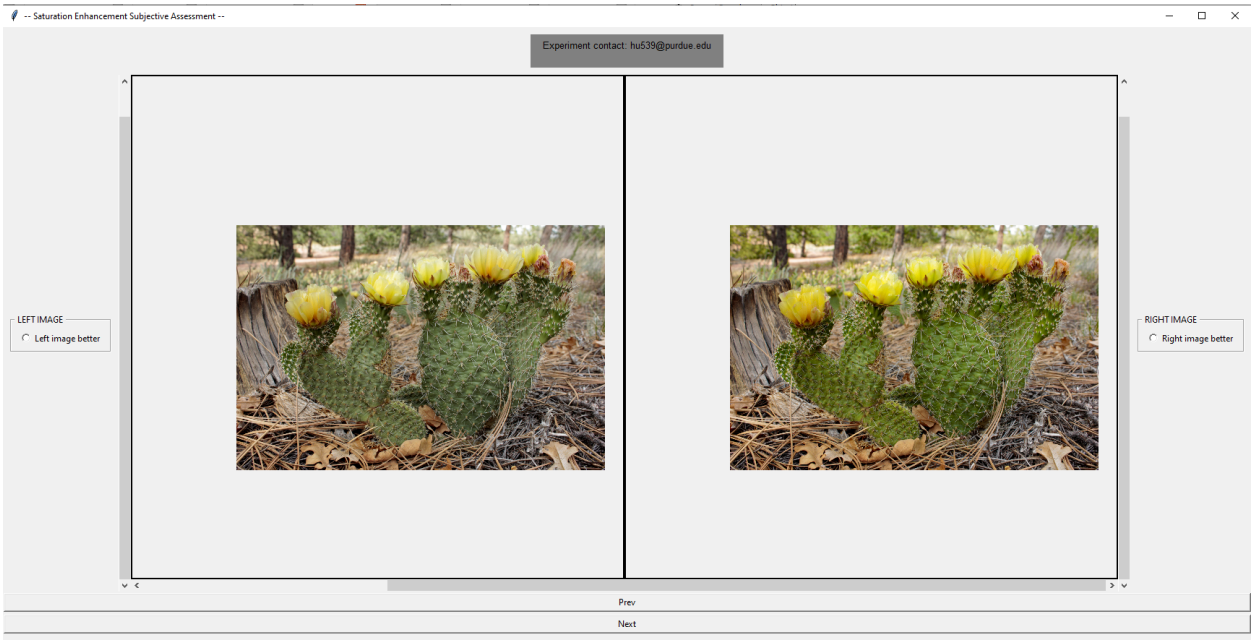

Figure 1: Sample example

Each pair of images will consists of two images as shown in the above sample example. You will basically decide whether you prefer the left image or the right image. There will be a detailed illustration at the end to make you understand that which regions you usually need to focus on to notice the difference.

2 Precaution

- The code is written in Python 3.
- It may take up to 2 minutes to load the GUI window.
- In the experiment, there may be some delays with the GUI pages. Please do not click on the GUI window until all widgets show up.
- Sit at a comfortable viewing distance (about 24in/60cm away from the screen). You could make small adjustments to the viewing distance if you feel it is necessary.
- **Do not skip any of the images or quit the GUI window in the middle of the experiment**. If you do so, your ratings will not be saved.
- After you finish rating all images, click on "Done" to save and exit the GUI and then you can proceed to the next part. A **.txt** file will be generated.

3 Experiment

3.1 Setup

- Download the experiment from `https://github.com/hu539/SE_Experiment.git`.
- Open the `SE_Experiment` folder in a terminal window.
- Type "python3 part1.py" in a terminal window. This will lead you to the experiment.

3.2 Procedure

- Run "python3 part1.py". You will see a GUI prompt window.
- Choose the left or right image you prefer. If you really cannot figure out the difference, just click on either one.
- Click on the "Next" button to go to the next page. Click on the "Prev" button to go to the previous page. Note that if you revisit previous pages, your ratings of these pages will be cleared and overwritten.
- When your assessment of part 1 is completed you will see the message "Please click on "Done" to save and exit." After pressing the "Done" button, the results will be saved into `"yourname_results_part1.txt"` file.
- There will also be one temporary file named `"tempfile_part1.txt"`.
- **Note**: if you accidentally skipped some images, it will indicate the image that you missed after you click on "Done" as a warning pop-up window. However, since you will still need to click "Previous" button to go back to the specific image, I recommend you to make sure you didn't skip any image.
- Email the two **.txt** files to **hu539@purdue.edu**

4 Training

In this section, I will show you three examples where you will usually notice the difference.

4.1 Sky or River

If you feel two images are about the same to you. Try to figure out the background sky difference as shown in Fig 2.

Figure 2: Sample example

4.2 Grass or Tree

If the image set contains grass or trees, try to focus on them. This is where usually the most visible difference can be seen.

Figure 3: Sample example

4.3 Object

In some cases, it may be necessary to focus on the same specific object in both images in order to see a difference.

Figure 4: Sample example