

Your first task is to enhance the supplied images using techniques of contrast adjustment, noise reduction, color correction, and so on. This time I decide not to provide any specific images. Instead, please try to find images, either from the Internet or by taking pictures yourself, for your experiments. Of course you should look for images taken in less than ideal conditions so that you can see the differences made by your image enhancement techniques. Each of you should do experiments on at least four different images. It is okay if you want to share images with the classmates.

The images might not need the same kind of processing. As a result, you should write your processing techniques as modules so that you can try different combinations or parameters for different images. Try to do your best.

You can use either MATLAB, C/C++, or Python 3.x for the project.

Regarding the restriction on toolbox/library usage:

You CAN use toolbox/library functions for:

- Image reading, writing, and display.
- Color space conversion.
- Matrix operations not specific to images.

You CAN NOT use toolbox/library functions for:

- Image resizing.
- Intensity transformations.
- Histogram computation.
- Spatial filtering. (This includes functions for doing correlation, convolution, template matching, etc.)

If you're not sure about whether something can be used or not, ask the instructor.

About the submission:

- Submit your report (as a single PDF file) through New E3.
- Regarding the content of the report:
 1. The main text (max. 10 pages, not counting the code listing) should include the following sections:
 - Introduction / Objectives
 - A review of the methods you have used (be concise)
 - A explanation of the experiments you have done, and the results.
 - Discussions: Your observations, interpretations of results, and remaining questions.
 2. The report should be typed single-spaced, with 12-point font size.
 3. Include the program code listing at the end of your report, starting from a new page as a separate section. The code listing part does not count toward the page limit.
- Do not submit files in ZIP or RAR or other compressed forms. Do not submit program codes in separate files.

The grade of each project is based on the following:

- The amount of effort you put in.
- Quality of your report (organization, clarity, completeness, depth).
- Quality of your outputs.
- Quality of your code (correctness, efficiency, clarity, documentation).

Other notes:

- Late submission: 10% deduction per day, up to until the submission is closed (usually one week from the due date).