scc0251/5830— Prof. Moacir A. Ponti

Final Project (2019)

UPDATED: May 3th, 2019.

The aim of the final project is to use image processing techniques to solve a problem that has an image as input and that outputs image(s) (or also additional information). This activity is individual for PhD/MSc level students, and may be developed in groups of up to 3 students for undergraduates.

The following are deliverables (all subject to grading) of this project:

1. Proposal (deadline 15/05)

2. Partial Report (deadline 29/05)

3. Final Report (deadline 24/06)

4. Presentations (19 and 26/06)

1 Proposal

The proposal comprises: (a) creating a Git repository at github or gitlab to host the project, (b) creating a README at the respository with project title, name of the student(s), an abstract that includes the objective of your project, the main image processing tasks involved (such as: image restoration, image segmentation, image description, etc.) and the application (medical imaging, biometry, steganalysis, computational photography, etc.), examples of images that are going to be the input for the intended application (c) including names and USP number of the group, title/idea for project and abstract at the Tidia-AE Wiki page list, as well as the URL for the created repository.

Once a specific title/idea is included in the Wiki page, there can be no repeated projects. Therefore check if the ideas is already taken before submitting yours.

- Deadline for the proposal: **15/05**,

2 Partial report

The partial report must include the definitive proposal that the group/student is going to pursuit. It must include an update at the git repository, in particular in the README file:

1. The main objective,

2. The description of input images (with examples) including the source of the images (website, paper, acquired by the student(s)),

3. Description of steps to reach the objective, including the methods that are intented to be used (e.g., image enhancement, edge-detection, morphology, segmentation, texture analysis, color analysis, keypoint detection etc.),

It should also present some initial code with the first results obtained analysing the images.

- Deadline: **29/05**. Commits after this date will not be considered as partial report

3 Final Report and Code

The report should be either organized in a markdown (md) or a notebook (ipynb) file, and must include:

1. All requirements for the partial report, updated,

2. Description of steps and methods used in the project,

3. Results obtained discussing cases of success and failures.

The code must include:

1. The documented/commented source code,

2. A demo program, that allows to run a small instance/example of your project.

OBS1: the report and demo must be in English.
OBS2: you may use any programming language.

- Deadline **24/06**: commits to the repository after this date will not be considered.

4 Presentation

Students will present their projects on **19/06** and **26/06** in a 8-minute pitch + demo-session format, in which students will show their final results. It is obligatory to run a demo during the presentation, even if it is a toy example.

All materials must be in English, but Portuguese may be used to present the contents.

The order of presentation (for individuals or groups) will be drawn (randomly) on 19/06 at 9:55am (5 minutes before starting the presentations). All groups should be at the class and prepared to present at this time. If you intent to use the desktop of the class, please prepare it before.

19/06 – 15 presentation slots, starting at (sharp):

10:00am, 10:12am, 10:24am, 10:36am, 10:48am, 11:00am, 11:12am, 11:24am, 11:36am, 11:48am, 12:00pm, 12:12pm, 12:24pm, 12:36pm, 12:48am,

26/06 – 15 presentation slots, starting at (sharp):

10:00am, 10:12am, 10:24am, 10:36am, 10:48am, 11:00am, 11:12am, 11:24am, 11:36am, 11:48am, 12:00pm, 12:12pm, 12:24pm, 12:36pm, 12:48am,