# ELE510 Image processing and computer vision, fall 2021

# Project rules

The project grade counts for 40% of the course grade.

The project title will be given **Friday 29th October**

Deadline for deliver is **Sunday 14th November**, i.e. it will be over 16 days.

Oral presentation: Monday 15th and Tuesday 16th of November in lab-class hours

1. The project is done in groups of preferably 3 (2 groups are possible) and is without guidance (can be considered as a home exam). The same grade is given for all the group members.
2. Students can form their own groups. We will make a google docs where students can sign up individually or in groups. We will form groups if signed up individually.
3. The project is given as a **title for the report**. Subtitles can be used to specify the problem further if wanted.
4. The project has to include an experimental part (conducted in python or Matlab etc.)
5. It is expected not less than 30 hours work on the project pr. student
6. A written report with the given title (and with possible subtitles) has to be prepared. The **report size should be 3000-4000 words,** + program listings, appendix.
7. The report is delivered on Canvas in two parts, not later than announced time:

* **One single PDF file with the project report**.
* One 5-6 minutes video of a presentation of the project

1. If a project is received but a report not delivered at the given time and date, the result is recorded as Failed F. If illness with medical certificate occur, postponement can be accepted.
2. If the student fails on the project, or a project is not finished, it is possible to do it again with *another subject* (title) next semester.
3. The presentations are given orally on in lab-class hours. Details of times for the specific student will be posted on Canvas. The students give the same presentation as prepared on the uploaded video (5-7 minutes), followed by a few minutes of possible questions. **This is mandatory**.

## Structure of oral presentation (video)

Use a powerpoint (or similar) presentation to show the title, the chosen sub-problem, approach, experiments and main results. Make it easy to understand which part that you have done yourself. You can mention which Python libraries and functions you found useful if you want. The video must be **limited to 5-7 minutes.** Dont use too much time. Think of the main message which can always be presented in 5-7 minutes, you can not present all details.

When presenting:

* Introduce/motivate the problem ( 1 min)
* Show sketch our outline of your method/algorithm (approx. 2 min)
* Show some experiments and results ( approx. 2 min)
* Conclude ( 30 sec)

**You can make the recording by using zoom recording function, and make your face visible. In zoom, start a meeting (alone), share/show the presentation, have a small window with your face, when ready start recording. Use your own voice. Use pause recording and switch between group members. Try that both/all presents at least 1-2 minutes.**

## Structure of the project report

The report should be written in English (The language as such will not be part of the evaluation of the project). **The length should be 3000-4000 words, + program listings, appendix (excluding appendices).** The reports will go through **plagiarism check**. Use your own words and remember references.

The following parts should be included:

• **Summary**

A short summary of the project presented in the report, 100-200 words.

**• Introduction:**

It is important that the title and introduction is in accordance with the theory and experiments. Define a sub-problem/subject you want to solve/describe that fits under the title that you were given.

**• Theory:**

Here you can use material from lecture notes, books, the web, papers, articles and reports, but write and formulate the theory *with* *your own words*. Remember to use references.

**• Implementation:**

It is expected that experiments in Python (or ex. Matlab) are carried out. Here you can describe the methods and algorithms you have used and implemented. (files, program listing should be given in appendixes.) Explain how you have solved the problem(s). *Remember* *references to sources of methods and programs. If you are using others code, it has to be clear which parts that are implemented by you, and what parts that have been downloaded. A good way to solve that is to make a table listing the files that are used (and are in the appendix) and write in the table if they are produced by you, or downloaded, with a reference to the website. You can also use such a table to mention important built-in python functions and libraries you have used.*

**• Experiments and results:**

Here you *present and discuss* the experiments and show results as images, tables and graphs. If you have many similar images you can put excessive material in an appendix.

**• Conclusion**

A brief conclusion of the project. Don’t repeat what you wrote if you have been discussing your results in the previous chapter. Make a more overall conclusion of the main topic, and the main result. This should not be long.

**• References**

In the references you can use links to some web pages, but published papers and books etc. are usually preferable.

**• Appendix**

Program listings etc.

If large amounts of data/results are produced, these should be put into appendix.