



Vision and Cognitive Services

SCP9087563 - LM CS,DS,CYB,PD,CE

Final Exam and Projects

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Exam

- Students are asked to work on a project
- They must submit a **written report** addressing in a critical fashion all the issues dealt in the project
 - ▶ The report should be submitted (approx.) one-week before the exam date on Moodle
 - ▶ The report should follow the format uploaded on Moodle: max 6 pages + references
- They will present and **discuss the project** and pass an **oral examination** on the content of the course
 - ▶ They should prepare a presentation (slides): ~30 min

Projects

- **Project-V1:** compare different cognitive services or public implementations (across different modalities or APIs) for a specific application [2 stud]
- **Project-V2:** combine different cognitive services or public tools to build a specific application [2-3 stud]
- **Project-V3:** build your intelligent application / algorithm (using the appropriate frameworks such as TensorFlow, PyTorch, etc.) [2-3 stud]

Note: you should work in a group (if you want to work alone you should motivate this choice and ask for permission in advance)

Project proposal

- Project proposal: no more than 3000 characters
- Your project proposal should describe:
 - ▶ What is the problem that you will be investigating?
 - ▶ What data will you use? If you are collecting new data, how will you do it?
 - ▶ What method or algorithm are you proposing? If there are existing implementations, will you use them and how?
 - ▶ How do you plan to modify such implementations? You don't have to have an exact answer at this point, but you should have a general sense of how you will approach the problem

Note: don't forget the names and emails of the group members

Final report

- The following is a suggested structure for your report:
 - **Introduction** (10%): describe the problem you are working on, why it's important, and an overview of your results
 - **Related Work** (10%): discuss published work or similar apps that relates to your project. How is your approach similar or different from others?
 - **Dataset** (15%): describe the data you are working with for your project. What type of data is it? Where did it come from? How much data are you working with? Did you have to do any preprocessing, filtering, etc., and why?
 - **Method** (30%): discuss your approach for solving the problems that you set up in the introduction. Why is your approach the right thing to do? Did you consider alternative approaches? It may be helpful to include figures, diagrams, or tables to describe your method or compare it with others.

Final report

- **Experiments** (30%): discuss the experiments that you performed. The exact experiments will vary depending on the project, but you might compare with prior work, perform an ablation study to determine the impact of various components of your system, experiment with different hyperparameters or architectural choices. You should include graphs, tables, or other figures to illustrate your experimental results.
- **Conclusion** (5%): summarize your key results; what have you learned? Suggest ideas for future extensions.

Evaluation and grading

- The report will be evaluated taking into account:
 - Methodology (i.e. quality of the proposed solution), presentation and experimental results
 - Grade range: [0,...,31]
 - If $proj_grade < 18$ you can't participate to the oral exam and should re-submit the report
 - You can't submit the project report twice within the same exams session
 - This applies whether you are asked to re-submit the report or because you want to improve its grading

Evaluation and grading

- The final grade will be obtained taking into account:
 - *Proj_grade* (shared among the members of the group)
 - The outcomes of the oral exam (project presentation and answers to the questions), on an individual basis
 - Note: usually you can expect to get a **final grade** that is in the range +/- [0,...,5] w.r.t. the initial *proj_grade*