EECS 442/504 Final Project Guidelines

Your final project will have three deliverables:

- Proposal (5%). As long as your proposal is approved, you will get the full credit for this part of the evaluation. *We **will not** deduct any points from approved proposals*.
- Final report (70%), due on Dec. 16.
- Presentation (25%), Dec. 12-15.

Presentation times:

We will send out a sign-up sheet for final project presentations at a later time.

The final report should follow the **CVPR** format (LaTeX template can be downloaded here). Your report should be no longer than **four pages** (excluding references). Please make sure that it contains the following sections:

1. **Introduction**: Please describe the motivation for your work. Be specific about the problem you are solving. Is it an interesting/significant problem? What are your contributions?
2. **Related work**: What has been done previously? What's the strength/weakness of previous approaches? How are those works connected to the approach you are studying?
3. **Method**: Please describe the details of your approach. If it's about neural network architectures, please include a figure. If it's an algorithm, you may want to include a pseudocode (see here). Feel free to include both if you feel necessary.
4. **Experiments**: What is the data that you are using? What are the hyperparameters? How is the model evaluated? What are the baseline approaches that you are comparing your method with? How does the performance of your method compare with these baseline methods? Tables and figures are efficient ways to convey your experiment results.
5. **Conclusions**: Please include the most important take-away message. This can be one paragraph about the reproducibility of the work, the strength/weakness of your method compared against baseline methods, and future work that can be done.

Grading rubric (EECS 442 only):

We are going to evaluate your report and presentation based on three criteria:

1. **Background** (20%): How is the project related to previous research? What's the relative strength and weakness of the approach studied in your project and related work?
2. **Format and Clarity** (40%): Is the report in CVPR format? Are you using math notations properly? Is the report/presentation easy to follow? Do you clearly explain your method? Have you clearly explained the reasonings for your hypothesis and design choices? Have you provided enough details in the report for the readers to reproduce your results?
3. **Completeness** (40%): Does the report have all the required sections? Have you successfully reproduced the results from the paper you choose? (if you are testing your own ideas, have you managed to make your approach work?) If not successful, what could be the reasons? Have you done an ablation study to understand each part of the approach? Note that, though you should strive to get good and interesting results, it's OK if you couldn't completely reproduce the results from the chosen paper or outperform baseline approaches with your proposed method. We will evaluate your work mainly based on the thought process demonstrated in the report/presentation. However, a complete failure to replicate previous results or implement your own ideas will lead to a deduction of points.

Grading rubric (EECS 504 only):

We are going to evaluate your report and presentation based on three criteria:

4. **Background** (32%):
   Students in EECS 504 will be expected to include a survey of relevant work in the field. This section should be similar in quality to the Related Work section of a high quality paper. Students should cite and discuss the results of important papers related to the area of study, as well as recent work. For example, if the project were about object detection, students could consider citing and briefly describing classic object detection papers (e..g., [1, 2]), as well as recent papers (e.g., the deep learning-based detection work), and any relevant papers that are closely related to their project (e.g., a paper they are reimplementing, and predecessors to it).
5. **Format and Clarity** (28%): Is the report in CVPR format? Are you using math notations properly? Is the report/presentation easy to follow? Do you clearly explain your method? Have you clearly explained the reasonings for your hypothesis and design choices?

Have you provided enough details in the report for the readers to reproduce your results?

6. **Completeness** (40%): Does the report have all the required sections? Have you successfully reproduced the results from the paper you choose? (if you are testing your own ideas, have you managed to make your approach work?) If not successful, what could be the reasons? Have you done an ablation study to understand each part of the approach? Note that, though you should strive to get good and interesting results, it's OK if you couldn't completely reproduce the results from the chosen paper or outperform baseline approaches with your proposed method. We will evaluate your work mainly based on the thought process demonstrated in the report/presentation. However, a complete failure to replicate previous results or implement your own ideas will lead to a deduction of points.