Group #13 Final Project Proposal

Paper: Self-Supervised Classification Network

Aimed Category: Very good - Excellent

Students:

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Does the proposal include all the required sections? Does it include all the required content in each section?
Yes

If the answer is no to the two questions above, does it require resubmission? How? By when?
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Is the project proposal aligned with the aimed grade?
The project proposal is aligned with the aimed grade of “very good” if the proposed experiments are carried out successfully, according to the definition of the good/very good range in the assessment criteria. However, if your group aims at a higher grade of “excellent”, you need to go beyond the scope of the papers method and experiments, here are some ways that you can propose: https://canvas.kth.se/courses/35470/pages/project-grading-guideline.

If the project proposal goes beyond the aimed grade, why?
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If the project proposal promises below the aimed grade, why?
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Is the project proposal computationally infeasible? How?
Yes, considering that the original paper used a batch size of 4096 distributed across 64 NVIDIA V100 GPUs when training on ImageNet, the proposal is indeed computationally infeasible. To make it more feasible, you can try to work on smaller datasets at first, like MNIST or CIFAR10 or CIFAR100, and also smaller backbone networks such as ResNet-18, to illustrate that your re-implementation is correct, then you can try to extend to larger datasets. When training on larger datasets, you can consider reducing the batch size and the number of training epochs accordingly.

Additional Suggestions (Optional): do you have any additional suggestions when they design their experiments and/or evaluation or implement the project, or write their report?
Your proposal mentioned that you are going to change the backbone model, classifier architecture, parameters, and hyperparameters, which is a good machine-learning research

practice. You can think more about the extensions to get a higher grade of “excellent”, like how to extend the basic project to different tasks.

Bonus parts (Optional): What would count as bonus in their proposed plan?

Other notes (Optional): any other notes they should consider?
“If we manage to improve performance, we will consider this a huge success” is hard to achieve considering your computation resources, but trying to do so is a good motivation!