DSA5204 Homework 2

Due: 25 Feb 2023

1 Instructions

Homework 2 is the project proposal. **This is group work, so only one proposal should be submitted per group.** You will write a 2 page proposal on your project, including the following information:

1. The full citation of the publication(s) chosen and the type of project (application, algorithm development or theoretical analysis)
2. An introduction to the problem the paper is aimed at solving
3. What background reading you expect to do to understand the paper
4. What you plan to reproduce and/or extend from the paper
5. How you would evaluate your results
6. The planned division of the work amongst your group members - this will be subject to change, but you should include a provisional plan

The proposal will be graded with the following criteria:

- Clarity of exposition of the research problem
- Clear plans to carry out the project
- Technical depth of chosen paper (it will have to be enough for a term project, most papers from appropriate avenues fall into this category. If not appropriate, you will be notified after this proposal)

2 Research Paper Sources

You may select any papers on deep learning accepted for publication at a reputable conference or journal, such as (but not limited to)

- International Conference on Machine Learning (ICML)
- Neural Information Processing Systems (NeurIPS)
- International Conference on Learning Representations (ICLR)
- Conference on Computer Vision and Pattern Recognition (CVPR)

You may also choose journal papers, e.g. those from Journal of Machine Learning Research (JMLR), IEEE Transactions on Pattern Recognition and Machine Intelligence (TPAMI), Neural Networks, etc. As long as the paper is of good quality, and has sufficient technical depth, it will be fine for this project. This will be checked when you submit the project proposal.

3 Computational Resources

For application and algorithm development projects, you may require GPU computational resources. You may look for the following sources:

- NSCC `https://www.nscc.sg/`
- NUS HPC `https://nusit.nus.edu.sg/hpc/`

- Google colab https://colab.research.google.com/