Project Requirements

Machine Learning: 10-605

Spring 2019

1 Course Project Guidelines

Your class project is an opportunity to explore a large data machine learning problem of your choice by fully replicating a paper. Below you will find specific details on how you should format your paper review and details on which you will be graded.

1. Projects can be done in teams of 1-5 students. Team members are responsible for dividing up the work equally and making sure that each member contributes.

2. If you have issues you are welcome to visit Barnabas during his office hours after classes or TA's during their office hours

Your project will be worth 24% of your final class grade, and will have two deliverables:

1. **Presentations**. Your teams presentation will occur during class on either 24th of April, the 29th of April or the 1st of May, which day exactly will be assigned on that day, so you need to attend all of the 3 presentation days (8%).

2. **Final Project Reports**. The reports should be a maximum of 4 pages (not including references), Due 3rd May at 11:59pm (16%). You should also submit all code which you used in your final project to Autolab.

Presentations

Here is a brief description of what the presentations will involve.

1. Teams should create a Powerpoint presentation which they will present to the class, it should describe the paper's methods, results and usefulness in the ML field. You can also discuss some of the challenges of replicating the paper and if you have finished the project already you could explain whether you were successful or not.

2. All other students in the class are required to submit peer feedback via a Google form reviewing your presentation. The peer feedback will be taken into consideration as part of your presentation score. Being part of the peer reviewing counts towards your own presentation score.

3. All team members must present some portion of the presentation.

4. Presentations should last no longer than 10 minutes, if you go over this time we may have to cut your presentation short.

Final Report

Here is a description on what your final report should include, your submissions should be written in latex using NeuIPS formatting and it should be uploaded to Gradescope.

1. The title, this should include the members of the project team, please include Andrew ID's here.

2. Introduction: What paper are you covering? Give a brief summary on the paper, including details such as the method and the results, what does this mean in the grand scale of machine learning? Additionally add any other relevant details you will discuss in the results.

3. Results: How well were you able to replicate the results of the paper? Were there any difficulties? If you were unable to replicate the paper you should explain why. You should describe how happy you are with the results and whether you were able to improve them or how you would go about improving them.

4. Conclusion: What are the strengths and weaknesses of this paper and it's methods? Can you think of anyway to address these weaknesses?

5. References and citations: Clean and correctly formatted citations and bibliography.

Grading Criterion

The page limits are strict! Papers over the limit will not be considered. Each deliverable of your project will be evaluated based on several factors:

1. Completeness: Did you replicate the entire paper? Whether you were successful or not does not matter as long as you can explain why.

2. Beyond the paper: The best papers will demonstrate understanding by suggesting how they could begin to improve the methods described in the paper and evaluate where this paper could be relevant in ML, by discussing it's strengths and weaknesses.

3. Clarity of writing: The report should be organized clearly and well written. It should be able to give a good review of the paper without the reader having to read the original paper.

4. NeuIPS format: Use NeuIPS format for all your reports. Length: Don't exceed the page limit.

5. Structure: It should be structured as above.