Grading Criterion

The page limits are strict! Papers over the 8 page limit will not be considered. Each deliverable of your project will be evaluated based on several factors:

1. Creativity: The groups are encouraged to come up with original ideas or novel combination of methods discussed in class. A project exploring new ideas (algorithms, methods, combination of methods) is scored higher than a project without many new ideas/applications. Unlike conference or journal papers, even if the new idea do not work its fine as long as you motivate them and try to explain why you think they did not improve on the baseline(s) you tried.

2. Completeness: The extensiveness of the study, experiments, and analysis of results. A project that involves well-designed experiments and thorough analysis of the experimental results, and comparisons to optional baselines or simple methods is more informative then a project that just shows the results of a new suggested method.

3. Clarity of writing: The report should be organized clearly and well written. Too many grammatical errors will make it hard to understand, and will cost you points.

4. Structure: See the following section for more details

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

Report Structure

Final Report

1. Title, Authors (Including Andrew ID's)

2. Abstract (2%): A very brief overview of your project.

3. Introduction (15%): What are you trying to solve? Why is it important? It should have a thorough and clear explanation of what's at stake, and in a well-formulated (e.g. mathematically) format.

4. Background and Related Works (10%): Highlight previous work related to your topic that you may have referenced to help guide your project, including baselines you are comparing to, as well as papers that you found useful/related.

5. Methods (35%): By the final report, we expect you to have implemented extensions beyond the baseline. Its fine to use existing libraries but in that case you should either attempt to extend them or attempt to use novel combination of methods. You should describe what work you have

completed towards creating a method or pipeline which improves on the baseline. What methods have you completed? What is your motivation behind these techniques (you are highly encouraged to come up with an original idea of your own rather than simply implementing or applying an existing ML algorithm)? Is your method non-trivial? Use math/figure to explain your approach, when possible. However, we **strongly** advise against having a huge figure that occupies a lot of space on a page.

6. Dataset (3%): Any processing beyond the data we provided? Did you combine the data we provided with other datasets?

7. Experiments and Results: Your experimental results (25%). Show plots of the performance of your algorithms and interpret what they mean. Be sure to label and explain this clearly. What do the results imply about your methods? How did you set up your experiments? What are your baselines? What metrics did you use for evaluation? How do your results compare to prior work? Describe how the current results in each of the experiments align with your expectations.

8. Conclusion and Future Work (5%): Overall, what you accomplished and what would be the future direction for this project. Analyze your model and results. Highlight a few limitations of your approach (e.g., strong assumptions you had to make, constraints, when your method did not work in practice, etc.). Do the results and the explanation provide insights into the ML Methods you worked with? Comment on whether you think there is a way to further improve your method to eliminate these limitations.

9. References and citations (5%): Clean and correctly formatted citations and bibliography.