AI6127: Project Report Instructions

Each team must submit one project report, which is worth 30% of your overall grade. This document specifies what information you should include in your report. For this report, we require that you create your PDF file using the LaTeX template provided in this link:

https://www.overleaf.com/read/cwkczrbdnqdz

1 Report contents

Your final report should be written in the same style as a NLP/ML research paper. Your report should not exceed **8 pages (excluding references)**. Consider using the following section structure, though you are free to be innovative in your report structure.

(a) **Key Information:** Your report should have the following information.

- Title: The title of your project
- Team member names: List the names and ntu email addresses of all of your team members
- Mentor (optional): If you have an external mentor and/or NTU-NLP mentor, write their name(s).
- External Collaborators (optional): If you have any collaborators who are not AI6127 students, list them.
- Publication plan (optional): If you intend to submit this work to a conference/workshop/journal.

(b) **Abstract:** An abstract should concisely (less than 250 words) motivate the problem, describe your contribution, and highlight your main finding(s).

(c) **Introduction:** The introduction explains the problem, why it's difficult, interesting, or important, how and why current methods succeed/fail at the problem, and explains the key ideas of your approach and results. Though an introduction covers similar material as an abstract, the introduction gives more space for motivation, detail, references to existing work, and to capture the reader's interest.

(d) **Related Work (or Background)** This section helps the reader understand the research context of your work, by providing an overview of existing work in the area.

(e) **Approach (or Method)** This section details your approach(es) to the problem. For example, this is where you describe the architecture of your neural network(s), and any other key methods or algorithms.

(f) **Experiments:** This section contains the following.

- **Data**: Describe the dataset(s) you are using (provide references). If it's not already clear, make sure the associated task is clearly described. Being precise about the exact form of the input and output can be very useful for readers attempting to understand your work, especially if you've defined your own task.
- **Evaluation method**: Describe the evaluation metric(s) you use, plus any other details necessary to understand your evaluation. Some projects will have clear metrics from prior work on given datasets, but we realize that other projects will define their own metrics. If you're defining your own metrics, be clear as to what you're hoping to measure with each evaluation method (whether quantitative or qualitative, automatic or human-defined!), and how it's defined.
- **Model settings**: Report how you ran your experiments (e.g. model configurations, learning rate, training time, etc.)
- **Results**: Report the quantitative results that you have found so far. Use a table or plot to compare results and compare against baselines.
  - If you're a default project team, you should **report the F1 and EM scores you obtained on the test leaderboard** in this section. Make it clear whether you are on the non-PCE or PCE leaderboard. You can also report dev set results if you like.
  - Comment on your quantitative results. Are they what you expected? Better than you expected? Worse than you expected? Why do you think that is? What does that tell you about your approach?

(g) **Analysis:** Your report should include *qualitative evaluation*. That is, try to understand your system (e.g. how it works, when it succeeds and when it fails) by inspecting key characteristics or outputs of your model.

(h) **Conclusion** Summarize the main findings of your project, and what you have learnt. Highlight your achievements, and note the primary limitations of your work. If you like, you can describe avenues for future work.

(i) **References:** Your references section should be produced using BibTeX.

(j) **Appendix (optional)** If you wish, you can include an appendix, which should be part of the main PDF, and does not count towards the 6-8 page limit. Appendices can be useful to supply extra details, examples, figures, results, visualizations, etc., that you couldn't fit into the main paper. However, your grader *does not* have to read your appendix, and you should assume that you will be graded based on the content of the main part of your paper only.

2 Code

We ask you to submit your code as a zip file or a hyperlink.

- Do include all project code written or adapted by you.
- Don't include the whole source code for off-the-shelf packages that you used without adapting (e.g. CoreNLP or PyTorch).
- Don't include model checkpoints or data.

3 Grading

Your project report will be graded holistically, taking into account many criteria: originality, performance of your methods, complexity of the techniques you used, thoroughness of your evaluation,

amount of work put into the project, analysis quality, write-up quality, demonstrating strong understanding, etc.

4 Team contributions

If you are a multi-person team, we ask you to submit a brief summary of what each team member did for the project (about 1 or 2 sentences per person). We will read these descriptions. For almost all teams, it will have no effect (i.e. team members all receive same grade), but for teams with considerably unequal contribution, we may investigate and/or give different grades to team members.

5 Submission instructions

Submission Due: 15 Apr, 2020 (before 6:30 pm). if you miss this deadline, your report might go ungraded.
Submission: Send it to ce7455.assignments@gmail.com with subject "AI-6127-PFR-YourStudentID". Make sure you CC your team members.