Final Project

1   Overview

The final project for the course will be done in teams of two. You can study a topic of your choice, as long as the objective falls within the topic of the course. Therefore any project that studies energy efficiency in relation with the evaluation of DNN models should be admissible. Projects can focus more on the DNN models as long as energy consumption is being evaluated in some way, or can focus on the design of the hardware implementation. Every team in the class should have a distinct project, but this distinction can be limited to some details of the application (for instance the use of a different dataset, different model, or different hardware architecture).

2   Topic Proposal

The purpose of the proposal report is to describe what you intend to achieve with your project in order to receive feedback at an early stage. A secondary objective is to allow you to practice writing project proposals, which is an essential step in research and development.

Your report should describe in separate sections your objectives, methodology, and the expected results. Make sure that your objectives are specific and achievable within the allotted time frame. In the methodology, you describe how you intend to achieve the objectives. Be as specific as possible, indicating which analytical or software tool you intend on using or developing. Also indicate the references that you will use, and describe your own prior expertise that you can leverage. This helps confirm that your objectives are achievable. Finally, describe what results you plan on presenting to show that the objectives have been achieved.

2.1   Grading Scheme

- Presentation and organization: 2 pt

- Methodology: 10 pt

- Objectives and results: 4 pt each

2.2   Deliverables

- A written report between 1 and 2 pages.

- The due date is **Wednesday March 23 23:59**.

3   Intermediate Report

The intermediate report should be thought of as a subset of the final report that provides some details on the methodology that was used as well as the main results.

3.1   Grading Scheme

- Overall presentation and organization: 2 pt
- Quality of the figures: 2 pt
- Completeness (no gap in the explanations, badly justified steps, etc.): 8 pt
- Correctness: 8 pt

3.2   Deliverables

- A written report from 2 to 5 pages, with figures.
- The due date is **Sunday April 3, 23:59**.

4   Oral Presentations

For the oral presentation, you are expected to present your entire project in a pedagogical way. Your target audience is the whole class, rather than the instructor. You should explain the final methodology that was developed, but, if applicable, you can also describe methods that you tried but did not work, or explain how you improved your initial method.

4.1   Grading Scheme

- Completeness (presentation discusses objectives, methodology, and results): 5 pt
- Technical correctness, clarity of explanations: 8 pt
- Quality of the slides: 5 pt
- Response to questions: 2 pt

4.2   Deliverables

- A 20-minute oral presentation.
- All presentations will take place during the last scheduled lecture on **Thursday April 14, 9:30–12:30**.

5   Final Report

The final report is the complete detailed account of your project. <u>It can re-use any material that was included in your previous reports,</u> but is expected to be more detailed. Contrary to the oral presentation, you should only present the methods that were used to produce the final results. Furthermore you should explain the methods in a way that facilitates understanding, which does not necessarily correspond to the way they were developed during the project.

5.1   Grading Scheme

- Overall presentation and organization: 2 pt

- Quality of the figures: 2 pt

- Correspondence with proposal, explanation of any changes in the objectives or method: 4 pt

- Extent to which objectives were achieved (weighted by the difficulty of the objectives): 4 pt

- Completeness/Correctness of the methodology: 4 pt

- Discussion of the results: 4 pt

5.2   Deliverables

- A report between 5–10 pages.

- Any code that was used to generate the results, properly documented.

- The due date is **Friday April 22, 23:59**.