Project Submission Guidelines

The course project will be an ideal opportunity to explore the challenges associated with building deep learning based practical tools that can have some real-world impact. It is required that the student should have some basic understanding of the problem that is chosen for the project and should ensure that the right kind of data is available to them to solve the given problem. It is critical to give sufficient emphasis in evaluating the proposed work. In addition, it is required that the students provide more insights into the knowledge they acquired during this project. Needless to emphasize that the main modeling component of the project should be using deep learning.

Project Team

It is highly recommended that you pick a topic that is of genuine interest to you. You can do an individual project or you can also partner with another student and form a two-person team. In the case of team projects with more than two students, there needs to be a strong justification about why the project needs to be performed with 3 members. The final and mid-term project reports must clearly state the individual contributions made by each student in the project.

Project Report Formatting

Report submissions must be in PDF and use ACM Conference Proceeding templates (two-column format). One recommended setting for Latex file of manuscript is: \documentclass[sigconf, review]{acmart}.
Template guidelines are here: https://www.acm.org/publications/proceedings-template.

The mid-term and final project reports should strictly adhere to the standard ACM submission format. The templates for Latex and Word are provided below.

Overleaf/Latex: Use the sigconf.tex version: \documentclass[sigconf,review]{acmart}
https://www.overleaf.com/latex/templates/association-for-computing-machinery-acm-sigplan-proceedings-template/rfvsrhgmghtc

Word/Document: https://www.acm.org/binaries/content/assets/publications/word_style/interim-template-style/interim-layout.docx

Sample Project Proposals are made available here.
https://drive.google.com/drive/folders/1jYE-xdbnU4e-5Z30mU7IxL668gYUwq-8?usp=sharing

Project Deliverables

The main project deliverables will be the mid-term project report, project reviews, final project report, project code and datasets, as well as presentation slides.

Mid-term Report

The mid-term project report should contain the following sections or their equivalents:

1. Title and Abstract
2. Introduction and Related Work (motivation, key limitations, ideas and solutions)
3. Proposed Contributions
4. Evaluation Plan
5. Primary Experiments
6. Work Distribution
7. References

An initial mid-term project report should be submitted by **11:59 PM EST on Oct 21, 2024**. Mid-term report submissions are limited to 4 pages of content and unlimited space for references. This report should include the details about the bullet points mentioned above and the work that will be accomplished before the end of the semester. Please remember that you will have 6 weeks to complete the project after the mid-term report is submitted and hence do not be too ambitious in what you are trying to propose. It is important for the student to strike the right balance at the time of mid-term report submission in terms of determining the right scope of the project.

Project Reviews

The mid-term project reports shall be reviewed by your peers in the course and graded by the Instructor and TAs. On the basis of the submissions, the authors will be added to the reviewer pool and assigned some proposals to review. The reviewers will remain ANONYMOUS to the authors but will be visible to the instructor and the TAs. You will need to provide your anonymous reviews by **11:59 PM EST on Nov 4, 2024** through the Canvas system**.** Upon the proposal submission, each student will be assigned multiple projects to review and write comments (based on project proposal guidelines provided in this document). Note that every student will be able to access every project and are free to write comments on others' project proposals in addition to the assigned projects. The main purpose of these reviews is to provide constructive feedback and learning opportunity to other students that can potentially help in improving the quality of projects. The students should not provide any demonizing comments and should be respectful of other projects that they review. The scores assigned by the peers are only meant as feedback to the authors and will not affect the grading criteria. However, the reviews themselves will count towards the grades for the reviewing student.

Each project review submission should contain the following sections:

1. Project Title
2. Summary
3. Reflection
4. Strengths/Weaknesses
5. Presentation Quality

NOTE: DO NOT include your name in the review submissions as they should be anonymous for each project.

Final Report

The final project report should contain the following sections or their equivalents:

1. Title and Authors
2. Abstract (motivation, method, experimental results)
3. Introduction
4. List of Contributions
5. Related Work
6. Model Description
7. Data Description
8. Evaluation and Experimental Results
9. Broader Impacts / Discussion (limited to ½ page)
10. Conclusion (limited to 1 paragraph)
11. Work Distribution
12. References

The final project report should be submitted through the Canvas system by **11:59 PM EST on Dec 9, 2024**. The project report, presentation slides, and any codes or other information that was used in the project should be submitted. If there is an overlap with any online projects or with any projects that are (or will be) submitted in other courses, it should be clearly indicated in the report. The final project report should include a detailed description of the points described above.

It should be noted that the number of pages of the report is not really a good indicator of the quality of the project. While the length of the project report is not a primary criterion for evaluating the quality of the project, we are providing certain guidelines to make it clear to the students. In the ACM format, the minimum length should be 7 pages for projects with only one student, 9 pages for project teams with two members, and 12 pages for project teams with 3 members. While there is no upper limit on the number of pages, students are encouraged to write about their work in a concise and coherent manner. Any kind of examples and detailed qualitative results that can typically occupy several pages should be moved into the Appendix section at the end of the document. Note that the minimum page limits indicated above do not include the Appendix section.

Each report should clearly specify the individual contributions of each student (in the case of group projects). Capturing snapshots directly from the software tools and displaying them in the report is strongly discouraged. The results should be presented in a professional manner and should include the evaluation metrics. There should be a take-home message for conducted experiments that will be potentially useful from the usability perspective, and you should emphasize your experience with working on this course project. The overall work done in the project will be the primary evaluation criteria for the project grades not the final results.

NOTE: Plagiarism is strictly prohibited and will be taken very seriously in this course. Project grade will be significantly affected if any kind of plagiarism is detected.

Presentation Slides

It should contain a set of 10-12 (or more, only if required) slides explaining each of the major steps in the project. As a rough guideline, the slides should contain the following components:

- Problem Statement – the major problem(s) being tackled. Any sub-problems.
- Data Description – describe the data in detail (including some basic statistics).
- Model / Architecture Design – algorithms and architectures developed and/or used.
- Evaluation – evaluate the experimental results and show comparisons to baselines.
- Lessons Learned – what are the lessons that this project has taught you. What you would have done differently given the opportunity again. Did everything go as expected?
- Broader Impacts – provide any actionable insights that can have a practical impact.

Project Checklist

- Ensure that this document is read carefully and follow the required formatting guidelines.
- Choose/propose a problem.
- Have a Project Title.
- Conduct literature review and summarize related work for this project.
- Make sure you have access to the data needed for the project.
- Do not use several pages to describe the data. You can move that to the appendix.
- Figures/Tables need to be clear. Avoid having small and/or overlapping content.
- Ensure the report is free of typos and grammatical errors.
- Make sure to add reference.
- Avoid any kind of plagiarism. If you use any text or figure from other papers/reports, please put it in quotes (for text) and cite it within the caption (for figures).

Project Submission Details

The course will use Canvas for submission of project deliverables.

Project Report Submissions

Each team should only make one submission and add all the team members as authors of that submission. Multiple submissions from different people in the same team should be avoided. The submission file can be updated several times until the deadline.

The authors need to consider the mid-term report feedback for their final submission and add a paragraph on how they have addressed the reviews and how it has changed their work (can be added to the Discussion section). The final project (in PDF) including the presentation slides and code should be submitted in a zip file to Canvas.

Submission Timeline (submissions are due at 11:59 PM EST)

Project Mid-term Report is Due on Oct 21, 2024
Project Reviews is Due on Nov 4, 2024
Project Final Report + Code + Slides are Due on Dec 9, 2024

Project Grading - (100%)

Project Mid-term Report - 20%
Project Reviews - 15%
Project Final Report - 40%
Project Code – 10%
Project Presentation - 15%