

COMS/CPRE 4590X Instructions on Term Project Report and Demo (Spring 2025)

The due time for reports (and associated code): **Wednesday, May 14, 11:59pm.**

Term Project: Survey Paper

General guide – According to the topic you chose, classify and comment on at least 10 related papers; the length of your report should be **at least FIVE** A4 pages in font size 11. Grading will be based on **the quality of survey paper** (i.e., technical-depth in the topic and papers, your comprehension demonstrated by the report, significance or timeliness of the surveyed papers, quality of your comments, and readability of your report.)

Your survey paper [15pts] should have the following components:

1. Abstract – summarize briefly the topic, the main contributions of the papers you reviewed, and the main insights you got from the survey. [1pts]
2. Problem description – describe what is the problem studied by the papers you surveyed, and whether/why the problem is important. In the problem description, you need to identify the system models (and/or assumptions) and the research goals of the papers. [2pts]
3. Summary and comments on each of the papers –summary of each paper on its contribution (be specific but as concise as possible). [5pts]
4. Comparisons and classifications of the papers in terms of, for example, the difference in problem definition, methods adopted, application scenarios, etc. [2pts]
5. Your insights got from the survey – for example, what are the strengths and weakness of the papers, what are the open problems, what could be the future research direction for the problem, etc. [2pts]
6. References – list all the papers you have survey with complete title, author list, source (conference/journal where the papers were published), publication date, etc. [1pts]
7. In the main text of your paper, you should have citations at appropriate places to acknowledge the documents that you have referenced to; failing to do so will result in deduction of 3 points. Note that, if you do not acknowledge your reference, you may be considered as plagiarize other work.
8. Spelling and grammar. [2pts] Note: though only 3 points are dedicated assigned to this aspect, poor writing also has serious impact on the evaluations of other aspects. So be careful to your writing.

Term Project: Implementation Option

General guide – according to your proposal, complete your design/implementation, prepare an oral presentation, and submit the package including your implementation (code or link to the code), and concise report.

Your implementation itself [7pts] – evaluated based on the correctness/completeness of the implementation, complexity/difficulty (i.e., efforts involved) per person, and the importance of the problem.

A Written Report [4pts] – Make your report concise while including the following components; no upper/lower bound on the report length.

1. Problem definition - describe what is the problem addressed by your implementation, and why the problem is important. In the problem description, you need to identify the system models (and/or assumptions) and the goals of your implementation. [0.5pts]
2. Conceptual Design – describe the conceptual design of the system you implemented. In this description, you present the composition of the system, functionalities (interfaces) of each component, the interactions between the components, and the major principles (e.g., core algorithms) in designing the components. Note that, this is a description of conceptual design, and so do not include code snippets; try to use diagrams/pictures in addition to plain texts. [1pt]
3. Implementation description – describe the implementation details such as the development platforms/tools, major data structures, major classes/methods, etc. Try to be specific while concise; try to use diagrams/pictures in addition to plain texts. [1pts]
4. User guide – details on how a user installs and uses your system. [0.5pts]
5. Self evaluation – discuss if design goals have been accomplished in your implementation and how. Be specific and concise; do not repeat the details in bullets 3 or 4. [0.5pts]
6. References – list all the documents you have referenced to in your project. Each reference should have complete title, author list, source (conference or journal where the papers were published), publication date, etc. [0.5pts]
7. In the main text of your paper, you should have citations at appropriate places to acknowledge the documents that you have referenced to. If you reuse others' code (which is allowed), explicitly acknowledge this in your report. Failing to do so will result in deduction of 2 points or more. Note that, if you do not acknowledge the documents/code your reference/reuse, you may be considered as plagiarize other work.
8. Poor writing and programming style has serious impact on the evaluations of your project. So be careful to your writing of both code and report.
9. If you work as a group, specify the contribution of each group member. Failing to specify this will result in deduction of at 3 points.

Pitch Talk [4pts] – Demonstration of your developed system; condensed version of the content of your written report.

Term Project: Research Paper

General guide – according to your proposal, develop your research project, write the paper, prepare an oral presentation, and submit the package including your paper and the implementation (or its link) if applicable.

Report. [11pts] - Your report (i.e., research paper) should have the following components. Try to be specific while concise. No upper/lower bound on page limit.

1. Abstract – summarize briefly the problem description, the importance of the problem, the main contributions of your research, and the suggestion for future work. [0.5pts]
2. Problem description – describe what is the problem studied by the project and why it is important. In the problem description, you need to identify the system models (and/or assumptions) and the research goals of the papers. [0.5pts]
3. Literature survey – brief discussion of related works on their contributions and limitations, as well as the difference between your work and them. [3pts]
4. Detail of your research – present the details on how you accomplish your research goal. If your research is to develop a new design, present the details of the design; if your research is to evaluate an existing design, present the design but focus more on your evaluation methodology.
5. Evaluation results – If your research is to develop a new design, present your planned evaluation methodology and ideally some evaluation (analysis and/or experiment) results. If your research is to evaluate existing design, present your evaluation results in detail.
(5 and 6: totally 6 pts)
6. Conclusion – Summarize specifically your contribution in this paper. [0.5pts]
7. References [0.5pts] – list all the documents you have referenced to in your design and implementation. Each reference should have complete title, author list, source (conference/journal where the papers were published), publication date, etc.
8. Spelling and grammar. Poor writing has serious impact on the evaluations of your work. So be careful to your writing.
9. In the main text of your paper, you should have citations at appropriate places to acknowledge the documents that you have referenced to; failing to do so will result in deduction of 3 points. Note that, if you do not acknowledge your reference, you may be considered as plagiarize other work.
10. If you work as a group, specify the contribution of each group member.
Failing to specify this will result in deduction of 3 points.
11. If your research involves implementation, submit also your code.

Pitch Talk [4pts] – Demonstration of your developed system; condensed version of the content of your written report.