

CSC 4740/6740 Data Mining Project Guidelines

Phase 0 – Filling the sign-up form – 5% of the project grade

In this phase, the students are expected to fill in the sign-up form by 26th Jan 2022. The teams will be announced by Feb 1st 2022

Phase 0 submission – **Due 1.26.2022**

Fill the project sign-up form here: <https://forms.gle/hWwaURZZ1qviSiyY7> and submit a screenshot of the submission page to ICollege.

Phase 1 – Project Proposal – 35 % of the project grade

In the first phase, a survey about the topic you plan to investigate needs to be conducted. You should have clear ideas about the motivation to choose this topic, the challenges/problems to be addressed in your project, potential solutions, system architecture/components, datasets to be used for evaluation, experiment design, scenarios for a demo, etc. After Phase 1, the project proposal will be ready. It should include the following sections (3-5 pages) and should include the following contents:

1. Introduction – a brief introduction on the topic
2. Motivation – why you chose to work on this problem? What is the previous research in the field and how is this research lacking?
3. Problem Statement – Formal description of your solution, to solve the problem mentioned above, methods you plan on using, and metrics you will be considering
4. Schedule – A schedule of different tasks and approximate dates on when you plan in accomplishing these tasks.

Phase 1 submission – **Due 2.21.2022**

One of the team members needs to submit the report to ICollege. Name the file as Team_<number>.pdf and include the team members' names as a comment for the submission.

Phase 2 – Final Report – 60 % of the project grade

This phase is the implementation phase of your project. Your implementation should clearly reflect your ideas regarding your investigated topic. Your implementation should include your novel technical contributions, not simply an implementation of an available algorithm, framework, system, etc. There should be meaningful experiments and test cases to validate and evaluate your work. A thorough (theoretical) analysis is required to derive observations and inferences.

Phase 2 submission - **Due 4.25.2022**

The project report constitutes 30% of your final project grade. The report will be graded over 100 points. It should include the following sections (5-10 pages):

- a. Introduction (10 points): background and motivation, problem definition, system overview, etc.
- b. Methodology (40 points): proposed algorithms/methods, adopted mathematical models, flow chart, system architecture/components, justifications, and analysis, etc.
- c. Evaluation (30 points): settings for experiments and demo, experiment results, observations and inferences.

- d. Learning outcomes (18 points): tasks accomplished by each team member, reasons for unaccomplished tasks or any failures, lessons learned from the project, and teamwork experience.
- e. Access link for your demo video. (2 points)

Create a folder called "Sources". In this directory, include all your code and executables (if necessary) for your project. A readme file is required which includes which systems (with version info) are required to run the code as well as the step-by-step instructions on how to run your code. This part constitutes 20% of your final project grade.

Your team will present/demo your work in class on Apr 20th and Apr 25th. This part constitutes 30% of your final project grade. Every team member must be present at the time of the presentation. Every team will have 15-20 minutes to present and answer questions. Do not fill the presentation with exhaustive and circumstantial contents. Please focus on significant stuff, your contributions, experiment/simulation results, findings and learned lessons. Demo with meaningful scenarios of your implementation is also required. You will also be graded on the quality of your slides as well as the content and the way you present your project. For preparing presentations, please refer to:

<https://homes.cs.washington.edu/~mernst/advice/giving-talk.html>

<http://www.inf.ethz.ch/personal/markusp/teaching/guides/guide-presentations.pdf>

Please sign up for project presentations in the following Google document:

https://docs.google.com/spreadsheets/d/1CnrSL7H-JoiRleM1OkrtVlrNR_L2xS7C_cgP024_6mY/edit?usp=sharing

Demo Video constitutes 20% of your final project grade. Record a demo showing your implementation.

(1) It is OK to have one member doing the demo. Make sure the presenter's face is in the video.

(2) Explain what you are doing while performing the tasks, just like doing a presentation.

(3) Perform all the functions of your project.

(4) Add anything you think is worth mentioning in the video.

(6) The video should not be longer than 10 minutes.

Upload your demo video to Google drive and submit the access link to iCollege. Also include the access link in your final report.

Project submission and deadlines:

Phase	Deliverable/ Submission	Deadline	Assessment
Phase 0	Sign up	Jan 26 th 2022	Screenshot
Phase 1	Project Proposal - Icollege	Feb 21 st 2022	Need Approval to proceed
Phase 2			
Project Report	Icollege	Apr 25 th 2022	30 %
Code	Icollege	Apr 25 th 2022	20 %
Presentation and Demo	In class	Apr 20 th and 25 th	30 %
Demo Video	Icollege	Apr 25 th	20%