CS 5002 Final Project

We will end this course with a Final Project, where you will put together the techniques, skills, and insights you have learned in this course to answer a question that is important to you.

For this Final Project, you will work in a group of size N, where N=1 or N=2 or N=3 or N=4. You are welcome to select your own groups for this Final Project.

For your Final Project, you will **identify and build one application that will solve an existing problem or answer a question of your interest**, based on one or more topics/modules covered in the Discrete Structures course.

By Wednesday November 22, you will submit a **Final Project Proposal** (roughly 1000 words) which must contain each of the following:

- A **context** that will help the reader understand your topic, and why this topic is personally relevant to you. Provide one paragraph for each member of your team.
- A clearly defined **application** that you wish to present. The application can be demonstrated using hardware/ software applications that you have created.
- A clearly defined **scope** for your project: given the short time frame of this final project, what do you intend to examine and what do you intend not to examine?
- A clear **description** of what you have done in the Project thus far, as well as what you plan to do over the next two weeks, with specific details.

Final Project Presentations will be conducted during the week of 11th December during lecture hours. Each group will have approximately 10 minutes to share their work, followed by a short Q&A. The presentation will be conducted online. More details will be posted on Canvas shortly.

Your Final Project will be marked out of **50** and will be worth 15% of your final course grade.

This assessment will be divided into your **Final Project Presentation** (worth 15 marks) and your **Final Project Report** (worth 35 marks).

Your Final Project Presentation will be evaluated on your organization, clear communication, effective use of visual aids (e.g., PowerPoint Slides, Python Program), and keeping to the required time limit.

Your Final Project Report will be evaluated on the following criteria:

- **Introduction (5 marks):** a context that will help to understand your chosen topic, with a clearly-defined question inspired by your issue with a rationale that explains what you are doing and why.

- **Analysis (25 marks):** a description of the methods you used to gather your data and/or solve your problem. What did you do and why? Show clear steps throughout every step of your analysis, referencing specific topics/modules covered in the CS 5002 course. If you produced a Python program, make sure you submit the .py file as an Appendix to your .pdf report.

- **Conclusion (5 marks):** based on your analysis, answer your question. Then discuss the weaknesses and limitations of your project and suggest avenues for future research. And finally, conclude with a paragraph (one separate paragraph per group member) describing what you learned from this project, and whether this report will be of any value to you – either for a future Northeastern course, or for some other project or endeavor you wish to pursue upon your graduation from Northeastern.

Page Limit: No page limit restriction.