

CSE191 Presentation Project: Special Topics in Discrete Structures

Introduction

Discrete Structures is a course full of abstract topics – predicate logic, proof techniques, sets, relations, functions, graphs, trees, etc. Some students will experience complete satisfaction from this level of topical abstraction, but most of you will become annoyed in at least one instance. That is, you’ll be asking yourself that age-old student question: “Why do we need to know this?!” Enter: this project.

Purpose

The primary purpose of this project is to expose you to real-world applications of Discrete Structures, thereby garnering both your appreciation and interest in the course material. Additionally, this will give you a little bit of experience with computer science research. Finally, you get to practice your “people skills” – teamwork, writing, and public speaking.

Assignment Specification

This semester, you will be responsible for presenting a special topic in Discrete Structures. You will be working with a group of at least 3 people, but at most 4 people to complete this task. You may select the members of your group; else they will be selected for you. There is a form available for group selection given in class as well as on the website. Group selection forms must be turned in at the beginning of class on Monday, September 11 or Tuesday, September 12. This is a multistage project. Due dates for each stage will depend on what order your group has been selected to present.

Stage 1: Executive Summary

This stage must be completed 3 weeks before your scheduled presentation. You will receive a detailed schedule for your group with the group assignments.

In this first stage, you and your group members will select a topic related to current course material. Note that the topics **MUST** pertain to current course material, so the instructor will enforce these bounds on topic selection. You and your group members must determine an appropriate depth of topical coverage for your presentation. From there, you should figure out what specific aspects of your topic you’d like to discuss. Write an executive summary and arrange a meeting time with me [at least one group member must be present]. During this meeting, we will review your executive summary and make sure your idea is feasible; if not, we will work it out. Meetings with me can be during office hours or at another time arranged via email.

I will not allow every group to present on the same idea. Therefore, when a group meets with me, I will post their presentation topic on the website. If two group ideas overlap

significantly, then the second group to meet with me will need to modify their topic and meet with me again. Therefore, if you want to present on a specific topic, then your group should try to meet with me as early in the semester as possible.

Where should I look for topic ideas?

Any chapter in the text could provide you with ideas for where the topics of this course are used. Check out the problems at the end of each section, or the problems described in the text. Sections that deal with applications of the course material specifically are: 1.5, 1.6, 2.3, 4.2, 4.3, and all of chapters 5 & 6. Another way to find interesting topics is to search for the name of the topic on the Internet and look for applications of that topic.

Stage 2: Presentation Planning

This stage will last at least three weeks. It commences at the end of the first stage meeting with me and ends on the day of the presentation.

In this second stage, your group will actually plan the presentation. This implies the development of specific content and format. The content must be pertinent to the topic and of an appropriate depth. The only restriction on format is that your presentation must not consist solely of Microsoft PowerPoint slides. If you are using PowerPoint or a similar program, you may not use more than 5 slides. That said, you also cannot spend the entire duration of your presentation on just those 5 slides. I encourage you to investigate alternative presentation formats. Consider incorporation of the chalkboard, Wolf Visualizer, overhead projector, poster, Java program execution, guided discussion, song/dance, etc. BE CREATIVE! [Let it be known that creativity points, which will be given frugally, will be bonus.]

Keep in mind that your group is being charged with the responsibility of educating your classmates; that includes the responsibility of maintaining student interest in your presentation.

You must arrange a meeting time with me so we can discuss your progress, this next meeting must occur at least one week before your presentation in class. Once again, this meeting could be during my office hours, or arranged at another time via email.

Stage 3: Presentation Execution

The day of your presentation will be distributed with the group assignments.

You will have 15 minutes to execute your presentation. All members of your group must speak in the presentation; one person cannot do the majority of the talking. All of the usual public-speaking criteria exist here: clarity, volume, eye-contact, etc. During your

presentation, your peers will rate your presentation. Their opinions about your presentation can potentially have a positive or negative impact on your grade.

Audience Evaluation

For all other presentations, you must evaluate the currently presenting group using a form that will be supplied to you. [This form will include a rating rubric. Additionally, the student must supply 2 questions that could be asked at the conclusion of the presentation, along with empty lines for comments. All parts must be completed – e.g., the comments cannot be left blank. The results of these forms will be compiled and delivered to group members anonymously.] Keep in mind that these students are your equals, so keep your comments constructive.

You are expected to be present for each group's presentation and fill out a rating form for each group. Excessive absences for presentations will have a negative impact on your personal grade for the presentation.

Stage 4: Write-Up

This stage is due one week after your presentation. Due dates will be given on the group assignments and schedule.

Each member of your group must submit a write-up that answers each of the items listed below:

- What was your topic? Did you find it interesting? Why (not)?
- Evaluate your self and your group for the first three stages.
- How did you like working with your group? Describe the dynamics. Cite specific examples.
- How did you like this project? Do you think it served its stated purpose? If not, how could it have been better?
- Compare/contrast your performance to previous groups, if applicable.