Group Case Study (GCS) Assignment
10.13.22

Overview

For this assignment, you'll work in teams of five or six students. *Your team's task is to research your case study topic, prepare an ethical analysis, and write a report as described later in this prompt. Your final written report, which must use the ethical theories, other models, and/or SECEPP code covered in class, will be due on Monday, 12.12.22.* **Read this entire prompt as soon as possible so you'll know what needs to be done.**

Due Dates and Percent of Course Grade

11.18.22: GCS initial report due (5%) before11:59 pm
- No late submissions accepted

12.12.22: GCS final report due (20%) before 11:59 pm
- No late submissions accepted
- 5% *individual* team member deduction on final report for not submitting your team member evaluations before **11:59 pm**, Tuesday, **12.13.22**

Learning Objectives

The table below specifies the learning objectives for this assignment together with their associated ABET outcomes (ABET is responsible for accreditation of all EECS majors).

Learning Objective	ABET Outcome(s)
To increase your awareness of the issues and dilemmas surrounding professional topics	4a
To report an ethical analysis of a case as well as a set of recommendations for resolving the case; an ethical analysis and recommendations should be rooted in the ethical theories, principles, models, etc., and critical reasoning processes discussed in class	4a, 4c, 4d, 4e, 4f
To be able to write a report that is well-organized, well-focused, easy-to-follow, and that uses visual aids effectively	3a, 3b, 3c, 3d, 3e
To be able to identify, locate, evaluate, use responsibly, and share information for the problem at hand	7a, 7c, 7d, 7e, 7f

Project Steps

To complete this assignment, follow the steps given below.
1. *Well* before the assignment deadline, hold a group meeting. At your first meeting, agree on a project management plan which equitably allocates tasks to team members and establishes due dates for the tasks. Be very specific about the tasks required and include team meetings so all team members can add them to their calendars. You will need to implement your project management plan using Asana *as explained in a separate assignment.*
2. Before you start writing:
   a) **Read the case description.** Re-read the brief description for your case in the GCS Case Descriptions document in Canvas in the Ethics and GCS Information module.

b) **Do the research.** All the case studies are real. The brief descriptions should provide sufficient information to get you started. You may use any source available to learn about your case and to look for other sources, but unrefereed journal publications, blogs, opinion pieces, Wikipedia articles, Facebook, and so forth, are not credible references and may not be used in your report; they may only be used as leads to credible references. The purpose of your research is to learn as much as possible about your case. You need to determine the facts surrounding your case (Who? What? Where? When? Why?), the stakeholders, i.e., those who have interests in or are impacted by it, the reasons behind the decisions and actions surrounding the case, and the impact of the decisions and actions. In your report, you'll provide a case summary based on this research which must include citations for at least three credible references. Credible references include bona fide news articles in major newspapers and from major news outlets, refereed publications, and textbooks. If you aren't sure whether a reference is permitted, ask your instructor. If you find a source that isn't credible but which you think is important for your report, send a request to your instructor. The minimum number of citations and references (references must map to citations, but you may cite a reference more than once) required in the final report is five. If you don't know the difference between a citation and a reference, find out!

c) **Develop an ethical analysis.** First identify the ethical issues in the case and why they're issues. *Use at least two different ethical theories or models* covered in class in your analysis (rule utilitarianism, act utilitarianism, rule deontology, act deontology, social contract theory, virtue ethics, the SECEPP code, De George's guidelines for whistleblowing, and Nissenbaum's privacy model; lecture slides for all lectures are available in Canvas in the Modules, and the Ethical Theories Summary Sheet is available in Canvas in the Ethics and GCS Information module). Depending on your case study, your ethical analysis will either i) analyze the ethical acceptability of the key actions, policies, and/or decisions of those involved in the case or ii) analyze the ethical acceptability of a particular technology or technological practice. Strive for a well-reasoned and thoughtful analysis, which shouldn't include "Because they said so" or "It's not fair." Support your reasoning with research studies, statistics, or other credible sources (Wikipedia is not a credible source; however, often the references listed in Wikipedia are). Be sure your analysis is thorough but also efficient and clear. For some cases, it may be necessary to provide more than one ethical analysis, but for each analysis at least two different ethical theories or models must be used. While you aren't required to do so, you may choose to augment your analysis using a structured argument.

d) **Identify a set of recommendations for resolving your case.**
   i) If your case is one with an actual outcome, what is your stance on the resolution? What would have been a more ethical solution? Use ethical theories, logic, and reason to make your argument.
   ii) For all cases, describe how <u>you</u> would resolve your case. What specific actions would you take or what specific policies would you recommend? Explain why. Try to propose a resolution which is (a) realistic, (b) implementable, (c) adequate for addressing the ethical issues, and (d) which considers the differential impacts on the stakeholders involved.

3. Download the appropriate IEEE template (5 or 6 authors). You will be using the IEEE Conference template for your report. Copies of this template for Word are available in Canvas in the Ethics and GCS Information module. Templates for LaTeX and Overleaf are also available if you prefer using one of them.
   a) Save the template as <team_name>_gcs_report.docx (or .tex if you're using LaTeX).
   b) Skim through the template, which provides both instructions and information. An example of a final report is available in the Ethics and GCS Information module. Note that sharing the

Word template as a Google Doc is likely to adversely affect the IEEE template formatting. One potential way to avoid this problem is for the team captain to maintain a copy on their laptop and cut and paste text from the online document. Check to see whether this works before writing a lot.

4. Write your initial report (due Friday, 11.18.22, before 11:59 pm). As you prepare your report, refer to the grading rubric provided in Canvas in the GCS Initial Report assignment. Importantly, the grading rubrics for the initial and final reports emphasize different aspects of the report! To some degree, the initial report is graded on form and the final report is graded on substance, but there is some overlap. It's in your best interest to read the rubrics! Your initial report should include the elements listed below. Note that column length requirements for the final report are given in this section.

- **Title and List of Authors.** The team captain should be listed as the first author.
- **Abstract.** The purpose of an abstract is to provide an "executive summary" of the work presented. As such, your abstract should summarize your entire report, including your case, your ethical analysis, your recommendations for resolving the problem, and your conclusions. It will provide the first impression of your report and should make a reader want to read it (in real life, if a reader isn't impressed by an abstract, they won't bother to read the rest of the paper). It must be concise—between 100 and 150 words, and you should avoid the use of abbreviations or acronyms. Citations are not allowed. For the most part, your abstract should be complete in the initial report, but changes are allowed in the final report.
- **Keywords.** Keywords are used to search for topics of interest to a user. The IEEE Xplore site uses these keywords in searches. You should include three to five keywords which can be single words or short phrases representing the major topics in your report. Again, keywords should be complete, but changes are allowed in the final report.
- **Introduction.** An introduction is like an abstract, but it is more extensive and can include citations. Look online for a few refereed journal or conference publications (Google Scholar has a gazillion) and note how abstracts and introductions differ. An introduction might include background information, motivation for the work and/or a statement of the problem, previous work presented by others on the problem (not relevant for you), and the key findings. Your introduction should be between 1/2 column and 1 column in length. Note that except for the first page, all pages have two columns. The introduction should be complete in the initial report, but changes are allowed in the final report.
- **Case Summary.** Your summary should explain the scenario for your case and represent the research you've completed. After reading the case summary, a reader should feel that they understand the situation as completely as possible. The summary must include citations for at least three credible references (see 2.b above as well as the IEEE Template). The minimum length for your case summary is 1 full column, but for some cases it will be substantially longer. The case study should be complete for the most part in the initial report, but changes and additions are allowed in the final report.
- **Ethical Analysis.** For the initial report, only identify the ethical theories or other models you plan to use, justify why you chose them, and briefly explain how you'll apply them. The more detail you are able to provide on your planned analysis, the better we will be able to comment on the validity of your approach. For the final report, your ethical analysis should be a minimum of 2 full columns. Typically, it will be between 2 and 4 columns long, but it depends on your case.
- **Recommendations for Resolving the Case.** For your initial report, if already resolved, what is your stance on the resolution and what would have been a more ethical resolution? If not resolved, briefly explain how you would resolve your case. In either situation, be sure to include an overview of the ethical theories, logic, and critical reasoning you'll use to support

your stance or resolution in your final report. For the final report, you'll flesh out your ideas, and in the final report this section should be a minimum of 2 full columns. Typically, it will be between 2 and 4 columns.

- **Conclusions.** In your conclusions, you will briefly restate the case you studied, your ethical approaches, and your recommendations. The end of your Conclusions section might be a warning about what may happen if your problem isn't resolved, a recommendation on what additional information might help with the resolution of the problem, a censure of the parties involved, or something else that leaves the reader thinking. Again, you'll benefit from looking at a few refereed journal or conference publications. Your conclusions should be between 1/3 and 1/2 column. Clearly, this section isn't likely to be complete in your initial report, but do as much as you can.

- **References.** You should include a minimum of five credible references (see IEEE Template and/or IEEE reference link given below for how to format references). **Importantly, all your references must map to citations. Do not include references if you did not cite them in your report! You may include as many references as you wish, but beyond 1/3 column, they will not count toward the minimum length requirement for the report, i.e., you can't pad your report with references. On the other hand, if your report is more than 5 pages in length, at least the last 1/3 column of page 5 must be references, i.e., you cannot put all your references on page 6.**

Note that this is an initial report and is not supposed to be complete. You aren't committed to any decisions or argument strategies described in your initial report.

5. Convert your initial report to a PDF file before uploading it. Only the team captain should upload the initial report.

6. Incorporate any feedback received for your initial report and complete your final report (due Monday, 12.12.22, before 11:59 pm). Note that the person grading your initial report won't be grading your final report, so any feedback you receive is meant only to improve your report. Refer to the grading rubric in the GCS Final Report assignment in Canvas. Note the following as you write your report.

   a) You must carefully apply at least two ethical theories, models, guidelines, or the SECEPP code in your ethical analysis. Two clauses *do not count* as two ethical theories; if using the SECEPP code, you must use several SECEPP clauses in addition to another theory, model, or set of guidelines.

   b) Pay close attention to the strength of any critical reasoning you use. See the lecture notes or the Ethical Theory Summary Sheet for the seven-step strategy to use to check your reasoning. A demonstration of your understanding of strong critical reasoning is expected in your report. Don't include fallacious arguments.

   c) Incorporate citations to at least five credible references in your report using the IEEE reference guide. This is a 40-page PDF document, but it's easy to navigate and gives instructions for all reference types (books, conferences, websites, theses, patents, online videos, etc.).

   d) If you use figures and/or tables in your report, you must number them, include captions, and refer to them in the text, e.g., "Figure 1 shows the initial assembly for the …"

   e) Minimum requirements are given for section lengths, but your final report should be five pages long including references, and it may not be shorter than four pages (and don't pad your four pages with references!). If all your sections are the minimum length, your report will be too short. See References in the Initial Report guidelines for exceptions to the five-page length limit.

   f) When necessary, references should be as evenly distributed within two columns as possible (see the example).

7. Convert your final report to a PDF file before uploading it. Only the team captain should upload the final report.

Grading

There is a grading rubric for the GCS Initial Report and a grading rubric for the GCS Final Report. The purpose of the initial report is to ensure all elements are in place, to ensure you are on the right track, and to provide course correction for your final report. As stated previously, grading of the initial and final reports will emphasize different aspects of the report. Ultimately, you should aim for a final report that meets all the specifications, has few if any spelling or grammar mistakes, reads smoothly as though one person has written it, shows solid reasoning, and segues well from one section to the next. **IMPORTANT: the team captain and only the team captain should submit both your initial and final reports.** Note that each final team report will have a baseline grade, but team member evaluations will be used to weight this grade as explained below. However, all team members will receive the same score on the initial report.

Team Member Evaluations

A team member evaluation assignment will be posted in Canvas before your final GCS report has been submitted. This assignment will be used to rate the contributions of your team. You will be given (n-1) x 100 points to distribute among team members where n is the number of team members. You can think of these points as evaluating the effort made by each team member. Points should be assigned as whole numbers, but you aren't required to use all your points. Ideally, everyone will have contributed equally, and if so, you'll give your teammates 100 points each. If you believe that one person has contributed more than their fair share, you're free to give that person more than 100 points. However, this means you'll have to give others fewer than 100 points. You may give 0 points to someone who made an insignificant contribution to the project.

The average of the points assigned to you by your teammates will be used to create a weight which will be used to determine your final score for the final report. The lowest multiplier will be 0 and the highest multiplier will be 1.25, i.e., even if your calculated weight is greater than 1.25, it will be capped at 1.25.

As an example, suppose you receive points of 100, 125, 90, 110, and 100, and the baseline score on your final report is 90. Then you'll receive a score of 1.05 x 90 = 94.5 on your final report.