

Assignment 5: Team Presentation 4 and Report

1 General Directions

This homework must be done in a group of two people; we will use the same groups as for the previous homeworks.

See Webcourses and for due dates and see the course syllabus for the presentation schedule.

2 What to Turn in

For this assignment, there are four deliverables:

1. An email to confirm your topic (see subsection 2.1),
2. Your draft report, and
3. Your final report (see subsection 2.2), and
4. Your presentation slides, turned in on Webcourses (see subsection 2.4).

2.1 Topic Selection and Confirmation Email

This part of the assignment is worth 5 points.

Send an email to the instructor, with a cc to your other group member, using the subject “Topic selection for homework 5 in COP 4910”. Your email must contain the following information:

1. Your group members names.
2. The problem that your presentation and report will address (see subsection 2.1.1).
3. The kind of innovation that you will be discussing. This should be both specific and relatively new (see subsection 2.1.2).
4. The specific enterprise that has this problem and that the innovation would help (see subsection 2.1.3). Ideally this should be the same enterprise your group used in the previous homeworks.
5. The title of your presentation and report, which should explicitly mention the problem to be solved, the innovation, and the enterprise. (or kind of enterprise).
6. A ranked list of 3 dates that you would like to present on (see the syllabus for the possibilities), with the first being your most highly desired presentation date.

Be as specific as you can be about the topic, problem, solution, and enterprise.

After receiving your email, your instructor will (promptly) email you back to either confirm the topic selection by your group or to ask for changes or clarifications.

To avoid duplication in topics, you will be required to change your topic if some other group has proposed the same innovation or topic. If two or more groups want choose the same innovation or topic, the first group to send in the email about that topic that follows all the directions above will be allowed to proceed, and the others will need to make a change.

Presentation date preferences will also be honored as best as possible on a first-come-first-served basis.

The course resource page has information that may be helpful for finding topics.

2.1.1 Problem

The problem selected must be a specific problem that affects the enterprise that you have selected. Ideally it should be an important problem that affects the enterprise in a measurable way, or an important ethical or societal problem that affects that enterprise or its customers or consumers. There must be a business motivation for the enterprise in the sense that they would potentially pay for the innovation.

Ideally, the class will learn something new from your presentation and report, so it is best to choose an innovative solution that reflects recent innovations.

2.1.2 Innovation

The innovation should be specific, not something general (such as “AI”), and it should be something that is not widely known (so that we will all learn something from your presentation and report). The innovation need not be some new hardware or software, it could be a new process (way of working) as long as that process falls in the domain of IT.

To find innovations, the Gartner Hype Cycles and Technical Insights can give some ideas. Other sources for innovations include journal articles and online resources.

After settling on an innovation, you may need to backtrack to find the kind of problem that this innovation will aid in solving and its consequences. Additional sources for problems include journal articles and online resources.

2.1.3 Enterprise

The enterprise could be either a business (e.g., Lockheed Martin) or a non-profit organization (e.g., the Red Cross), or a government agency (e.g., the Department of Energy). If the enterprise is quite large, then it is best if you pick a particular focus (sector) within that enterprise. If the enterprise or focus does not yet exist, you will need to define it clearly.

2.2 Draft Report and Report

The report draft report and final report are to be uploaded as a Word document or a PDF document.

2.3 Draft Report

The draft report is worth 35 points, which will be 5 points for being on time, 10 points for the formatting, and 20 points for content and clarity. When writing your draft, be aware of both the formatting and the grading criteria for the final report (below).

The draft report should be 3-5 pages long (although note that the final report will only be 4 pages long), excluding the bibliography.

The format should be that used by the *IEEE Open Journal of the Computer Society*. You can get the Word document article template from Webcourses (or by selecting from the IEEE Template Selector first “Transactions, Journals and Letters” then “IEEE Open Journal of the Computer Society” and finally “Word.” You are also welcome to use the \LaTeX article template if you wish.

The paper should thus be structured to have the following parts.

1. A title, list of authors, and date.
2. A brief abstract, which should be no more than 2-3 paragraphs (aim for less than 500 words).
3. An introduction that describes the problem and its importance and the (kind of) enterprise affected by the problem.

The introduction is also the place to describe any related work (papers or other solutions that attempt to solve the same problem or part of the same problem).

4. Optionally, a section that gives any necessary background.

5. Optionally, a section that defines the problem more precisely or in more detail.
6. A section that describes the solution approach, in enough detail that someone working in IT in the enterprise could implement the solution.
7. A section that describes the consequences of the approach.
This should include a cost analysis in as much detail as possible.
If there are significant other consequences for humans or society (e.g., loss of privacy or health issues or environmental damage), these should also be described.
8. A brief conclusion, that summarizes the main recommendation (whether to use the solution and how to use it) and reasoning behind that recommendation.
9. A bibliography of references cited.

The paper should follow the IEEE Editorial style, especially as regards to citations and bibliography. See the IEEE Editorial Style Manual at the linked URL for guidance.

The paper should be written for a reader who understands IT (or Computer Science) at the bachelor's degree level.

Note that all sources used should be cited. If you copy words or phrases from a source, be sure to use quotation marks and a citation to the original. However, don't overdo quotations; that is, most of your article should be your own words, not quotations.

2.4 The Slides, On Webcourses

Your presentation should ideally be 20 minutes long, and must be at least 18 minutes and no longer than 22 minutes. Your presentation must be delivered jointly by your group, with all group members speaking an approximately equal amount of time.

For this assignment, upload a PowerPoint file (or a PDF file if you are using some other presentation software such as Keynote) to Webcourses. The file name should include all names of the team members in your group, starting with the one whose family name is earliest in alphabetical order, with hyphens between the names and a comma separating the two names, followed by a suffix that accurately reflects the file format. For example your file might be named Jones-Margaret,Smith-Jane.pptx (or Doe-John,Zimmer-Frank.pdf).

Your talk for this homework will be about the same topic as your report. You can use your talk to develop your thinking about the report. You should practice your talk and aim to be able to deliver it in the allotted time. Note that you may tend to talk more quickly in front of the class, so allow for that.

The presentation itself is worth 95 points distributed as:

- 10 points: length of time (neither too long or too short, as specified above); for every minute over the maximum you will lose 5 points and for every minute under the maximum you will lose 5 points.
- 10 points: eye contact with audience and voice volume; we will take points off if you read from your slides, depending on the severity of the issue. We will take points off if you do not speak loudly enough or speak too loudly.
- 9 points: presentation slides; if slides are too wordy or have other distractions, then we will take points off, depending on the severity of the issue.
- 41 points: clarity of presentation and analysis with
 - 5 points for a good outline (problem, solution, consequences)
 - 12 points for a clear presentation of the problem
 - 12 points for a clear presentation of the solution (approach)
 - 12 points for a clear and thoughtful presentation of the consequences of the solution on the enterprise and on society (or the world).

- 15 points: clarity of analysis and thought, critical thinking, especially related to the consequences and their interaction with IT; we will take points off for analysis that is not thoughtful (i.e., that is glib or facile).
- 10 points: bibliography (i.e., a list of the references you consulted), which should appear in a slide (or two) at the end of your talk. You need not actually present these references during the talk, they are there for backup (and further study by those interested). For maximum points you must have at least 2 references in your bibliography.

Both group members will receive the same points for the presentation.

2.5 Final Report

The final report is worth 100 points.

The draft report should be 3-4 pages long, excluding the bibliography. Note that the maximum length is 4 pages (plus the bibliography, if it needs to go onto the fifth page). It should follow the same format as for the draft report (see above).

The grading criteria for the final report will be as follows.

- Format (10 points).
- Abstract (10 points).
- Introduction, which clearly defines the problem and background section, including any related work (15 points).
- Solution approach section, with enough detail and specificity (15 points).
- Consequences section, with a cost analysis (15 points) and consideration of other consequences for humans and society (10 points).
- Conclusions (15 points).
- Bibliography (10 points).

There will be the usual penalties for being late or not prepared.