

Assignment 4: Team Presentation and Report

1 General Directions

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

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

2 The Assignment

You are to do the following:

1. (3 points) Confirm your group and topic by email,
2. (97 points) Turn in your slides (on Webcourses, see subsection 2.7) and make a presentation, *ideally of 18 minutes, which must be at least 16 minutes long and no more than 20 minutes long* on a topic of your choice (see below),
3. (35 points) Turn in your draft report (see subsection 3.2) on Webcourses, and
4. (100 points) Turn in your final report (see subsection 3.3) on Webcourses.

2.1 Topic Selection and Confirmation Email

By the email due date (see Webcourses), you must email the instructor with the subject “Group and topic selection for homework 4 in COP 4910” with the following information:

1. Your group members’ names.
2. The enterprise that your group is imagining that it works for (and if the enterprise is very large, also the sector you are focusing on within that enterprise).
3. The problem that your presentation will address and why it is important for the enterprise.
4. The kind of innovation that you will be proposing to solve the problem. This should be both specific and relatively new (see subsection 2.4).
5. The specific enterprise that has this problem and that the innovation would help (see subsection 2.2). Ideally this should be the same enterprise your group used in the previous homework.
6. 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).
7. 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.

Note that this email must be sent by email, not from within webcourses as a message, from one group member to the instructor, with a cc to the other group member. As IT students, you need to know how to use email.

Be sure in your email to include answers to each point in the list above. You will be required to send an email with acceptable answers to each of these points before your talk can be scheduled.

2.2 The Enterprise

The enterprise your group is imagining it works for could be either a business (e.g., Lockheed Martin or a small business or startup) or a non-profit organization (e.g., the Red Cross), or a government agency (e.g., the Department of Energy). If the enterprise is very large, then you must pick a particular focus (sector) within that enterprise as well. If the enterprise is a startup, then you will need to explain what its business would be clearly.

2.3 The Problem

The problem selected (see above) must be a specific problem that affects the enterprise that your group is imagining it works for. You must explain why this is an important problem that affects the enterprise in a measurable way, or an important ethical or societal problem that affects that enterprise (or customers/clients specific to that enterprise). There must be a business motivation for solving the problem (e.g., increasing revenue or avoiding losses, lowering costs, or serving clients better for a government agency). The problem must be specific, and not general or nebulous (like “security”).

2.4 The Innovation

The kind of innovation you are proposing must be clearly related to IT or else you must provide a clear explanation of how it is related to IT. The innovation must also be novel in the sense that it is not in general use by the enterprise’s competitors. The solution may need to be developed in the enterprise, or it may be something that can be purchased. The solution need not be some new hardware or software, it could instead be a new process (way of working).

The innovation must be specific, not something general (such as “AI,” “Machine Learning,” or “Cloud Computing”).

2.5 Other Conditions

To avoid duplication in topics, you will be required to change your topic if some other group is presenting on the same topic. If two or more groups want to present on the same topic, the first group to send in the email about that topic will be allowed to proceed, and the others will need to make a change.

Presentation date preferences will be honored as best as possible on a first-come-first-served basis. There is no guarantee you will receive one of your desired presentation date(s), so do not delay sending your email.

2.6 Possible Topics

The class should learn something new from your presentation, so you must choose an innovation that is new enough to be of interest. If the solution is in general use, is more than 10 years old, or has at least two companies offering it for sale or as a service, then it is not considered new enough for this class.

Topics can be chosen based on your interests and background. The course resource page has information that may be helpful for finding topics.

In particular the Gartner Magic Quadrants and Critical Capabilities has various use cases that can be read to understand problems and ranks vendors that provide solutions. These include problems and use cases in the following broad areas:

- Software Infrastructure
- IT Services
- IT Management
- Business Applications
- Operations Management
- Communications Services

Other sources for problems 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. Some useful resources for that include the Gartner Trends.

Other broad areas to think about to find more specific problems include:

1. Accessibility and inclusion issues,
2. Security issues,
3. Privacy issues,
4. Customer Experience issues,
5. Healthcare and wellness issues (both for customers and employees),
6. Competition and disruption from use of AI,
7. Competition and disruption from use of DevOps or other software process innovations.

If you find yourself thinking more about a solution instead of a problem, think about what kind of problems that solution can be used for and explore whether your enterprise needs that.

The Gartner Hype Cycles and Technical Insights can give some ideas of potential solutions. Other sources for solutions include journal articles and online resources.

2.7 The Slides, On Webcourses

For your slides, 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 presentation slides should follow a good outline, as described in class, which clearly states the problem and its importance for the enterprise, makes a clear proposal about using the innovation to solve the problem (including the IT architecture of the proposed solution), and examines the consequence on the enterprise and the wider world. Your slides should have a 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 discuss these references during the talk, they are there for backup (and further study by those interested).

2.8 The Presentation

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.

Make sure that each person has the slides, so that you can proceed with the presentation in case one person has difficulties (e.g., with the network).

No videos are allowed in a presentation. You may show pictures from a video in your slides if you credit them properly (and have permission).

3 Grading

3.1 Presentation Grading

There is a 20 point bonus for presenting on the first day for this assignment, and a 10 point bonus for presenting on the second day.

The presentation is worth 100 points distributed as:

- 3 points: topic selection email.

- 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.
- 2 points: eye contact with audience; we will take points off if you read from your slides or notes, depending on the severity of the issue. If you are presenting on Zoom, there will be a 1 point penalty for this if you do not have your video camera on (use a cell phone camera if your computer does not have a video camera).
- 10 points: voice volume; we will take points off if you do not speak loudly enough or speak too loudly.
- 10 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.
- 40 points: clarity of presentation with
 - 10 points for a good outline (problem, solution, consequences)
 - 10 points for a clear presentation of the problem
 - 10 points for a clear presentation of the innovation (solution approach)
 - 10 points for a clear presentation of the consequences of the innovation on the enterprise and on society (or the world).
- 15 points: clarity of analysis and thought, critical thinking, and answers to questions asked; 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.

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

3.2 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 (see subsection 3.3 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 ACM Proceedings papers; use the template Word file in the file Foundations-of-IT-template.docx, which is found in the course homeworks directory. (This template is adapted from the ACM's Proceedings paper template; if you wish to use \LaTeX for your paper, there are also resources available for formatting the paper with \LaTeX on the ACM website.) See also the sample sample-paper.pdf file in the course homeworks directory).

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 one paragraph and less than 300 words).
3. An introduction that describes the problem and its importance and the (kind of) enterprise affected by the problem.

There should be a subsection that crisply defines the problem, in more detail. The problem should be stated clearly enough so that the reader can judge whether the proposed solution solves the problem (or not).

Optionally, there can be a subsection that gives any necessary background, including background about the enterprise.

There can also be a subsection that describes any related work (papers or other solutions that attempt to solve the same problem or part of the same problem) or alternative solutions (e.g., being sold by companies) to the problem.

4. A section that describes the solution approach, in enough detail that someone working in IT in the enterprise could implement the solution.
5. 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.
6. A brief conclusion, that summarizes the problem, innovation, and consequences, as well as the argument for why the enterprise should adopt the proposal.
7. A bibliography of references cited.

The bibliography must be formatted according to the ACM style, see <http://www.acm.org/publications/authors/reference-formatting> for details.

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.

3.3 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).