CSCI E-11: Term Paper Assignment
Prof. Brian Subirana

Overview

In this term paper, you will consider hypothetical future technologies and imagine how current technologies might be used or adapted to make that future a reality. To complete the paper, you will:

- Read the companion document, "A FUTURE Day in the Life of Dr. Brown," comprising nine fictitious vignettes, each involving multiple yet-to-be-invented technologies.
- Propose to explore one of the nine vignettes to explore, one of Dr. Brown's use of the future technologies in that vignette as a "use case", and one current technology to study in detail.
- Conduct three analyses corresponding to each of the Units of the course, in which you will:
    - Identify the *currently-existing* technologies covered in that Unit that might be used to make that use case a reality (and to make it effective, safe, data-secure, private, profitable, etc.)
    - Conduct a literature review researching those technologies.
    - Explain how those technologies could be used in the vignette's use case.
    - Review another student's work and give feedback (for the first two Units)
- Research and explain in greater detail how the one particular technology you chose for deeper analysis might be used in the vignette's use case.
- Rewrite the vignette's use case as it might be implemented using only present-day technology, effectively summarizing and integrating all your other work on the paper.

Submission timeline and grading

The project is graded out of 100 points (or 125 for graduate-credit students), worth 40% of your course grade.

Date	Submission	Pages	Grading
End of Week 02	**Proposal**, including: • The name of your chosen vignette and use case • A one-paragraph description of why you've chosen it. • Which technology, based on the syllabus, you'd like to select for deeper analysis (this can be changed later).	1	None, but required before any other submissions.
End of Week 05	**Big Data Analysis:** a description of how current technologies covered in Unit 1 could be utilized in your vignette and use case.	2	15 points, revisable*
End of Week 07	**Peer Review #1:** Read another student's *Big Data Analysis* and provide written feedback.	1**	7.5 points
End of Week 09	**Internet of Things Analysis:** a description of how current technologies covered in Unit 2 could be utilized in your vignette and use case.	2	15 points, revisable*
End of Week 11	**Peer Review #2:** Read another student's *Internet of Things Analysis* and provide written feedback.	1**	7.5 points
Week 14	**Full Final Paper,** including: • Your **Proposal** from Week 02, rewritten as an introduction • Revised **Big Data Analysis** • Revised **Internet of Things Analysis** • **Cybersecurity Analysis:** a description of how current technologies covered in Unit 3 could be utilized in your vignette and use case. • **In-Depth Review** of one particular current technology that could be used in the use case • **Vignette Revision:** A revised version of the vignette use case,	 2 2 1	 15 points, non-revisable* 20 points 20 points

	implementable with current technologies studied in the course. A creative summary and integration of all your preceding work.		
Week 14	• **This piece is only for students taking the class for graduate-credit. Students will have to choose between two options:** **1. Review Paper Outline:** ○ Find 10 scholarly papers related to your chosen vignette, using Google Scholar or the Harvard Library online resources. ○ Explain how you would develop a review paper using these articles. In doing so, briefly explain what each article would bring to the review paper. Do not write the actual review paper itself, just an outline. ○ The minimum length of this assignment is one page (excluding the citation list) but it can be more pages if needed**.** **2 Business Plan Brief:** ○ Create a business plan to exploit your revised vignette. You should address the following questions in a power point presentation of at least 4 slides. ○ Who is the end user? ○ What is the problem you will solve? ○ What technology will you use? ○ What is your revenue model?	≥1	25 points

* You will receive an initial grade for your Big Data Analysis and your Internet of Things analysis. You will also receive feedback from course staff and your classmates. If you revise your work based on feedback, the course staff may revise your grade on these analyses. Your Cybersecurity Analysis, and all other components of the Final Paper, are not eligible for revision.

** You may choose to write a one page review in a separate document and submit it. Canvas also allows for inline commentary in peer review. It is acceptable to choose that option, provided your total overall feedback is comparable to one page.

Research Resources

As a registered Extension School student you can also take advantage of some Harvard library benefits, including access to Grossman Library and more than 3,000 electronic databases and journals through the Harvard Libraries Portal. You are also eligible for discounts on computer hardware and software. See Computer and E-mail Services for more information.

The Writing Center in Grossman Library is a great place to get assistance with your coursework, find answers to grammar questions, work on structuring an essay, and get feedback on a thesis. You may also find our resources for building academic skills and tips for avoiding plagiarism helpful.

If you live near Cambridge, the computer facilities at 53 Church Street and the Grossman Library allow you to utilize hundreds of the latest programs and tools to get projects—large and small—done on time.