2019 Fall Computer Science 263

Designing Value in Human-Computer Interaction

Final Project

Final Report Format

Chuck Huff, ESD, Spring 2019
The Final Report will be turned in as a PDF document sent by email to the instructor and to the client by the end of the last day of the exam period. Most reports range from 8 to 12 pages of text (total of 15 to 50 pages including all appendices). Here is the Final Report Rubric I will use in grading.

This semester, your report must include action items for your client. You should use the ethical or social science terminology you have learned to support (not to obscure) whatever conclusion or actions your report presents. Your paper should focus on clear communication of your proposed action items. The report should provide both persuasive language and empirical documentation for your claims.

The format for the report is as follows. Deviations from this format are, of course allowed when appropriate.

1. *A cover page* with a title that is descriptive of your conclusion or recommendations and contact information.
2. *Executive summary:* A summary of items 3 through 5 below. See format at the end of this page.
3. *Introduction to the Project*. This may be just one page, that outlines in more detail than you could in the executive summary what the project is, why it is important, and what your approach was.
4. *Ethical Issues or value tradeoffs* addressed by your solutions. This section can be organized in various ways. The items below are things that should be included, not a suggestion for organization. Section B and C could also be combined if the organization works better.
   A. Explanation of issues and value tradeoffs that your report addresses
   B. Any important issues or value tradeoffs your report does not address
   C. The aspects of the socio-technical system that factor into each issue or tradeoff
   D. Any relevant data/research that informs your analysis
5. *Proposed Conclusions or Actions:* This section should contain a set of conclusions or action recommendations that address each specific concern mentioned in the previous section. When giving action options, provide at least two options (preferably more) for each specific concern, and

evaluate those options in terms of the goals, resources, and the ethical or social concerns involved. In most cases the goals will be multiple. For example, maintaining accurate records, guarding privacy, and minimizing cost (outlined in section 3). The effect of each option on this suite of goals should be noted. The options recommended should be carefully constructed to avoid simple black-and-white choices (e.g. safeguard privacy vs. disregard privacy) and to emphasize the best available (or least bad) options for dealing with the issue. Technical fixes should be included as options, but should not be the only option listed. For instance, procedural changes, personnel training, additional consultations or study, and other alternatives to a technological solution should also be recommended. When drawing empirical conclusions from your data or research, make claims that are carefully drawn to avoid over (and under) promising.

6. *A Resources section*
   A. *Relevant literature:* This should be a prose introduction to the most balanced and readable discussions of the issues that confront the client. This section can be organized as a short introduction followed by an annotated bibliography or as a prose review with references. It should include at least one item (e.g. a reader or an advanced article) that will serve as a window to further literature.
   B. *Other resources*: e.g. software, websites, user groups, best practices, etc.
7. *A Methodological Appendix*
   A. *Methods used to collect data*: This section should begin with a rationale for the particular methods chosen, and a detailed and concrete description of those methods. Individual interviews should be noted (though privacy issues here are important) as should the specific questions asked in the interviews and any changes made in the interviews to meet needs. The description of any field observation should include a description of, and a rationale for, the observation sites and times. It should also include a description of the significant events looked for, a description of the significant events discovered, and a list of any changes made in the observation protocol made to meet needs. The description of day-in-the-life scenarios should include a rationale for the choice of those particular perspectives and time frames, a description of the information from which they were compiled (e.g. interviews, manuals, etc.), and finally, the detailed scenarios themselves. Talk aloud protocol descriptions should include all stimulus materials and written protocol of the interaction, and a listing of important typical responses. Same goes for focus groups.
   B. *Comprehensive data reports*: Tables and other graphs, images, etc, either from methods or results.

ABOUT THE EXECUTIVE SUMMARY

An executive summary should be for executives, and thus it should be action focused (something to execute). For this purpose, you need to establish that:

1. *something* needs to be done (e.g. there is a problem or opportunity)
2. You provide empirical and analytic conclusions that suggest
3. *appropriate* options 1, 2, and 3.

So that your client will be able to act in an informed manner, you have to convince them that you have valid and reliable data to support the problem or opportunity and to trust what you recommend as options. Thus you need to show that you have read the needed research or collected the right data, that your conclusions are trustworthy, and that your analysis of the options is appropriate. But in addition to doing all this, it should be SHORT, **no more than 2 pages**, and organized so that the decision maker can **scan** it. This is *not an essay for a professor* (that was the take-home exam). Get to the point.

A reasonable organization for the Summary (only a suggestion):

1. A summary sentence(s) that says "Based on data from X and research on Y, we propose that you do A, B, and C in order to take advantage of I and to avoid J and K." (note: this sentence should leave out some things mentioned below, and include only the most urgent/important things).

2. We had the task to X and so we collected data from N_1 people by interviews about X_1, N_2 people by observation of X_2, and N_3 people by questionnaires about X_3. We also reviewed the literature in X_4 from source S. See page X to Y for the methods of this data collection.
3. There is one opportunity and three difficulties we identified by this analysis:
   A. an opportunity to make X better (see page a)
   B. a perceived injustice by Y stakeholders (see page b)
   C. a possible threat to privacy of J based on Z (see page c)
   D. an access problem that K stakeholders have (see page d)
4. We propose a set of solutions to these issues, most of which can be implemented by *date*.
   A. you can take advantage of this opportunity by doing A or B. We recommend A because of O (see page e)
   B. You can address the perceived injustice by C or D. We recommend D since it will avoid P (see page f)
   C. You can avoid the threat to privacy by E or F. Both are effective, do E if you want *this* or F if you want *that*. (see page g)
   D. Avoid the access problem by doing G. G is low cost and completely resolves the issue (see page h)
5. We recommend doing (B) first, since it is urgent, and (D) soon since it is low cost. The other two will require more resources, but could be implemented within X time frame using Y resources that you might be able to get from Z.

If you write directly and to the point, you can do all this in 2 pages, with plenty of white space to highlight the organization of the summary.