CMSC 434

Introduction to Human-Computer Interaction

Group Project Proposal
Due: Sunday, February 19th, 11:59PM

Assignment Overview
Your assignment is to extend and refine the existing one paragraph “elevator pitch” for your project into a longer, more comprehensive three to four page project proposal (images, figures, and tables are free and do not contribute to the page count). The appendix (required) does not contribute to the page count either. You will work on this assignment in your four-person team.

Project Proposal Sections
A successful project proposal will have, at the very least, the following seven labeled sections. Please email me or post to Piazza if there are questions or concerns about these sections.

Section 1: Title and Abstract
The title can be an updated form of the title from the “elevator pitch” and the abstract will simply be a refined version of your “elevator pitch.” Note, however, that the abstract must be no longer than six sentences. Roughly, your abstract should contain a motivating sentence about the problem and why it’s important, a sentence on past solutions along with their limitations, a sentence on your proposed solution and how it is unique from past approaches, a sentence on how you plan to evaluate the effectiveness of your proposed solution, and a sentence on who this will benefit and why. Your abstract must address each of the aforementioned points.

Section 2: Introduction
The introduction should clearly articulate the problem and why it is important. It should also include specific high-level goals for the project (i.e., remember from class: what does a “win” look like for this project and what metrics are you going to use to know that you got there). You should be sure to describe how your proposed solution is novel or, at the very least, how it may extend existing solutions. The introduction should be two to three paragraphs.
Section 3: Background / Review of Past Work
This section should provide a background context on the problem (e.g., its history) as well as a review of past work. I expect at least eight specific references to either related commercial products or research papers. When relevant, you should include a figure of the related application, tool, product, or webpage with a numbered figure caption below. When referring to past work it's important to include a description of the past work, why it's relevant and significant to the proposal at hand, and how your proposed solution is different.

When citing past work, use the same numerical referencing paradigm that was introduced for the "Individual Project Brainstorming Assignment." That is, each reference is assigned a unique number and referenced like this [id]. At the end of the proposal, the last section will be a “References” list that maps the unique id to the reference. See the example in the last assignment.

Note: If you are having trouble with this, remember that during the in-class team brainstorm session, I spoke to each team about at least one relevant project to their proposal. This might be a good place to start. If you feel stuck, email me or post to Piazza and Kotaro and I will help you. It's absolutely essential that you understand the current solutions within your problem space so that you (1) don't reinvent the wheel; (2) can fully differentiate your solution; (3) can extend and build upon good ideas from past work and avoid the bad ideas from past work.

Section 4: Target Users
In this section, you should describe at least one group of target users, their needs, and why your proposed solution benefits them. A quality write-up will include a discussion of both target users and secondary users of the system. In fact, most, if not all, of the project proposals have more than one user group. Don’t believe me? Think about the IDEO shopping cart redesign. You may think that “shoppers” are the only users of the carts, but we know better. Shoppers may be the primary users—perhaps the most important users—but others include the employees who must clean and collect the carts from the parking lot, the mechanics who must fix the carts, and even the homeless who might want to use the cart for their own reasons. All of these user groups (with the exception of the last group) must be able to effectively use the cart or the cart design fails. Even further, the primary user group—shoppers—can be further categorized into subgroups: power shoppers, shoppers with children, shoppers with disabilities, shoppers in a hurry, very tall shoppers, etc.

Section 5: Scenario Walkthrough
Here the proposal should walk through a specific scenario where the application or service is used. It should highlight the problem that you are trying to solve, how the problem would currently be addressed, and how your application addresses the problem. Be sure to highlight the key features of your application or service. Feel free to include rough sketches here to help portray your point (these sketches are not required—if you do include them, treat them like a normal figure with a figure caption).

Section 6: References
A list of references formatted according to the ACM Style guide (link).
Section 7: Appendix
The appendix is a copy of the original elevator pitch (in its unmodified form) followed by a brief paragraph describing how the proposal has evolved since its original form.

Grading
You will be graded on how well you execute on each of the above seven sections. You will be additionally graded on creativity and writing quality across the entire proposal. Finally, I will be factoring in peer review to help assess the quality of the work and the output from each team member. As the syllabus notes, this proposal is worth 5% of your overall grade in the class.

Submission
You will not be emailing this submission. Instead, post it directly on the CMSC434 class wiki. Each team must make a wiki for their project. You will use this to post deliverables the rest of the semester. See: http://cmsc434-s12.wikispaces.com/project+teams. This assignment is due Sunday, February 19th, 11:59PM.