Thesis Reading and Critique

Due date: Monday, January 31, in-class

Assignment

Your first (real, besides the wiki survey) assignment in this course is to read through a number of M.S. theses, and to present your critique and analysis of them. The assignment has two parts: the reading part and the critique part.

Reading Part.

Each of you will select four different M.S. theses out of a pool of approximately 9-10 theses selected by your instructor. The thesis pool for this course is composed of relatively diverse theses spanning most of the topics typically covered by M.S. theses at the CS department: Software Engineering, Databases, AI, Programming languages, Systems, Graphics.

Assignment. Do the following:

1. **Register** your theses on the wiki. The url for the appropriate wiki page is

   http://wiki.csc.calpoly.edu/590/wiki/Assignment1-Winter11

   On that page, put your name and the names/links to the theses you selected (you can use the names of the students to identify theses).

2. **Study** the theses. Of the four theses:

   (a) You have to read (at least) two theses completely (one of them should probably be closest to your area of research).

(b) You have to have read introductions and background/related work sections of all four theses.

(c) You have to have looked through the contents of the theses you have not read completely. You are expected to demonstrate a certain level of understanding of what each thesis is trying to accomplish, as well as the understanding of the actual accomplishments of the thesis.

On the wiki, please indicate which theses you studied in detail and which you only skimmed.

Critique/Analysis part

For this part of the assignment, do the following:

1. Analyze/Understand the structure of each thesis. Think of the following:
   - Do you think the structure of the thesis was successfully chosen?
   - Would you choose similar structure?
   - If the structure is imperfect, in your opinion, how would you improve it?
2. For each of the theses you selected, submit your evaluation of the thesis to the wiki. Each thesis has an associated wiki page with evaluations by students from previous quarters. You will add your evaluations to those pages. Your evaluation shall follow the already established standard: a few paragraphs of text followed by a formal evaluation based on the 11 criteria specified below.

Note: One of the theses presented to you was done under the instructor's supervision. The instructor has also been a committee member on at least two more theses presented to you. Please be aware that while the instructor has his own opinions about the theses in question, he has no intention of forcing those opinions on you. Your assessments of the theses will be judged valid and will fulfill the assignment even if your opinion is different from the instructor's, as long as you properly argue your position and provide support for your opinions.

Thesis Evaluation Criteria

You shall evaluate each thesis based on the following criteria:

1. **Problem Definition.** Is the problem properly defined? Is it clear?
2. **Writing Quality.** How well is the thesis written? Is the flow of the presentation easy to follow? Are there numerous typos, grammar errors in the text?

3. **Contribution.** Does the thesis advance the state-of-the-art in the field? How significant is the thesis to the field? (use your best guess on this. rely on the related work/background information provided in the thesis and your common sense, if the thesis is not in your area of expertise/research)

4. **Originality and innovativeness.** Are the ideas in the thesis novel? Does the attempted/completed work have analogs in research? Does the thesis break any new ground?

5. **Technical Depth.** How much technical depth does one need to understand the work described in the thesis? How well is this depth reflected in the text?

6. **Implementation.** Is there an implementation? How through does it appear to be? How well is it described?

7. **Validation.** Is there any validation to the main ideas of the thesis? How well-designed is the validation? How thorough is it?

8. **Potential for publication.** Did the research yield publishable results? How strong is the work presented and where can it be published?

9. **Potential of future research.** Does the research have natural extensions? Are there interesting unsolved problems raised by the thesis work?

10. **Overall quality of the project.** What is your overall impression of the work done by the student?

11. **Overall quality of the thesis.** What is your overall impression of how well the student captured his/her work in a thesis document?

Your thesis analysis page shall score the thesis on each criterion. For simplicity use $1 - 5$ scale:

Score	Meaning
1	Really Poor
2	Below Average
3	Average
4	Good
5	Excellent

(Feel free to use decimal values, e.g., 3.2, 4.5, 2.8).

Honor System

Generally speaking, it is possible to fill out the evaluations for the theses w/o reading them, simply restating the information contained in existing evaluations. I have little recourse against that. The reason why you are assigned massive reading in this class is to make your own eventual thesis documents better. This implies reading a few existing M.S. theses: both good and not so good, and analyzing both the content (what was done) and the write-up (how it was presented) and drawing conclusions for yourselves, on what works and what does not.

I have little recourse against you cheating on this assignment, short of engaging you in in-class discussions about the contents of each thesis. So, we use the honor system: you actually read the theses, while I trust you to have done so.

Deadlines

Assignment Part	Due Date
Register papers	January 10
Analysis/Critique	January 31