CPSC 422 — Project
Spring 2013

- This project can be done in a groups of size 1, 2 or 3.
- The main deadlines are
  - Proposal due: Wednesday 27 February
  - You are required to meet with the TA two or more times in between the proposal and the poster presentation to discuss your progress. It is recommended that you talk to the TA to help you develop your proposal.
  - Poster presentations: March 25 and 27
  - Final report due: 10:00am Friday April 5

Scope of the project

You can either do an application paper or a research paper.

For an application paper, you should choose some application that you know something about (e.g., teaching computer programming, diagnosing cooking problems, control of a game agent, designing bicycle routes) and investigate whether the techniques taught in this course can be used for this domain. Imagine that you have a job, where your first task is to do a feasibility study to evaluate whether the company should invest many dollars into the technology, and you don't want to be responsible for either losing an opportunity or for creating a fiasco. You will need to implement a prototype whose purpose is to critically evaluate whether this technology is useful in the domain. The first thing that the boss will ask is "what evidence do you have for your claims". The sole purpose of your implementation is to provide this evidence, and any extra frills are not wanted.

For a research paper, you need to extend one of the techniques taught in class. First, you need to look at some research papers to see what has been done. Then you need to suggest an improvement and evaluate it. To evaluate it, you need to compare how well your extension compares with the base case. You need to implement as little as possible to compare the techniques. You need to test the original and the improved version on a number of carefully chosen test cases.

You will need to implement something, but only enough to test how well the idea you are investigating works. Your implementation should be the minimal amount you need to evaluate what you are testing.

Proposal

You need to hand in a 1-page proposal that includes

- all members of the group (including email addresses)

- what you intend to investigate
- what you hope to learn
- what you will actually do.

Poster Presentations

There are two days set aside for poster presentations. Each group will be assigned to one day, and you will be assigned a number of posters on the other day to be an official reviewer of. You should see the poster presentation as an opportunity to explain something interesting to your classmates. Each of the member of the group should be able to explain your poster. More details about reviewing will be given later. The reviews will help you write your final report. Use the review form at `http://cs.ubc.ca/~poole/cs422/2013/project/review.txt`.

Final Report

Final reports will be individual. You final report will outline what you have learned. You need to be clear about what you tested and present the evidence that leads you to your conclusion. This should be written so that it can be understood by your peers who are taking this course. For example, it needs to state "we investigated X for Y. We found that it works well / badly for this domain. The evidence that we base our conclusion on is ...".

It needs to have an abstract, an introduction (what is the problem, why is it interesting), a description of what you did (enough so that someone can reproduce what you did), a description of your test methodology, your results, a conclusion, acknowledgments and a list of references.

Your report should be 4-6 pages Latex article style.

Plagiarism

Unlike assignments, discussing the project with your classmates is encouraged, as long as:

- Everyone you discuss your papers with is listed in the acknowledgements section of your paper.
- You are explicit about where the ideas in your project came from.
- What you hand in must be your own work.
- You can base your code on any other code as long as you obey the copyright and make it explicit what part is yours and what part is from some other source.
- If you want to quote something that someone else wrote, put it in quotations and attribute it to that person.
- You must reference every external source (book, paper, website, code) used.

Please read the bulletin board for more details.