

CMPSC 580
Topics and Research Methods in Computer Science
Spring 2015

Assignment 24
Module 4 Proposal
Due Tuesday, 28 April

Write a senior thesis proposal that is related to the topic of “computer graphics and information visualization”. Your proposal should be a *minimum* of five pages long, using the `senior_thesis_proposal.tex` file in the `cs580s2015-share/proposal-template` repository. You will also need to create a `.bib` file for your references, downloading your sources from the ACM Digital Library.

Choose a descriptive and accurate title for your proposal. Provide a one-paragraph abstract that summarizes the essential points of your proposal, connecting directly to the proposal’s title.

You may alter the section headings in the proposal template if a different organization seems more suited to your topic, but your proposal should still contain the same information—motivation and background, review of previous work in the field, method of approach, evaluation strategy, schedule, etc. Obviously you do not need to create a complete solution for the proposed problem, but you need to precisely describe the approach you would take (e.g., how your technique will automatically add overlays to a graph) and describe how you could potentially solve the proposed problem, which method or algorithm would you use, and a clear justification for your choices.

You have to include at least one technical diagram or a flowchart in your proposal. The flowchart can describe the process you are using, while a diagram could describe the technical details of your proposed solution, a model or an algorithm that you are using. You have to use TikZ, or some other similar software package, to draw your diagram in L^AT_EX. In addition to asking the course instructor for help, you may consult <http://www.texample.net/tikz/>, <http://www.ctan.org/pkg/pgf>, or <http://sourceforge.net/projects/pgf/> for more examples and explanations. Additionally, your proposal should include at least one additional element such as a formal statement of an algorithm, an equation with appropriate mathematical notation, or a screen shot of a program.

Your proposal should cite multiple scholarly resources for your topic and related fields—books, journal and conference articles, technical reports, etc. The full details about these resources should be formatted using BIB_TE_X and should appear in the “References” section of your paper.

You must have your proposal read and edited by at least one person in this class, and you must read and edit at least one proposal other than yours. As you are reading a module four proposal, please look out for the types of errors that we have examined in the *Bugs in Writing* and *Writing for Computer Science* text books. Submit the hard copy of the edited version (with hand-written comments by the editor) of your proposal signed by both the writer and the editor. Also submit a signed hard copy of the final version of your proposal. Your marked proposal should use a symbol to clearly indicate that you have resolved the stated concern. Please submit both documents in class on Tuesday, April 28, and also commit your final `.tex` and `.bib` files to the your course repository you have shared with the faculty in a subfolder with a name like “assignment24”.

I’m available in person and via email if you want to run any ideas by me, or if you are having problems with your L^AT_EX. To ensure that I can offer timely assistance, please ask for help early!