CMPSC 580
Topics and Research Methods in Computer Science
Spring 2015

Assignment 9
Ideas for a Senior Thesis Proposal
Part 1 due 5 February 2015
Part 2 due 6 February 2015

Part 1: Five Ideas

Create a short LaTeX document listing (at least) five possible senior thesis ideas that are related in some way to the topic of software testing and debugging. For each idea, come up with a proposed thesis title and a one- or two-sentence hypothesis/thesis statement, along with a description of your evaluation metrics and a short overview of the system that you plan to implement. Hand in a hard copy of this list at the beginning of Thursday morning's class (you might want to keep a copy for yourself to refer to during Thursday's discussion). Make sure you keep it in your Git repository.

These do *not* have to be "tightly coupled" to the subject of software testing and debugging through evolutionary computation. They do *not* have to be of the form "A testing method to handle . . . " or "A debugging tool to solve . . . " or "A novel empirical study of EvoSuite . . . ." Yet, there should be a clear connection between your proposed idea and the topic of this module.

It would be ideal if you come up with ideas that are personally of interest to you, but that is not an absolute requirement. Just try to propose feasible ideas; even if you are not interested in carrying out such a project, perhaps someone else in the class might find your idea worth pursuing.

During a session that a student will chair, we will discuss these ideas in class. Be prepared to provide further information about your ideas during this discussion.

Part 2: Lightning Talk and Slides

For Friday afternoon, prepare a "lightning talk", lasting about 3–5 minutes, together with several accompanying Beamer slides, in which you expand upon an idea for a senior thesis related in some way to software testing and debugging. In advance of Friday's session, please practice your talk to ensure that you can complete it in no more than five minutes; please review your proposed topic so that you are ready to answer several questions about how you will pursue it for your senior thesis.

In addition to placing the LaTeX source code of your slides in your Git repository, you must submit signed and printed copies of your slides at the beginning of Friday's class. Students who would like to complete sophisticated Beamer slides should search online for tutorials about creating their own "inner", "outer", and "color" themes. If you would like to apply existing styles to your slides, then please visit `http://deic.uab.es/~iblanes/beamer_gallery/` for many examples.