CSCE 936: Cyber-Physical Systems Final Project

Assigned: 2018-08-28
Due: proposal - 2018–09-04 at 14:00
draft of final report - 2018-10-18 at 14:00
presentation - last 5-6 classes of semester
report - 2018-12-13 at 13:00

Project Overview

This is your opportunity to put into practice some of the many concepts we talk about in this class. The goal is for you to apply CPS techniques and research to your own research problems. Additionally, you will prepare a proposal, paper, and a presentation. This will prepare you to write papers, prepare proposals, and make presentations in the future, something that will likely be a part of your career.

Additionally, this is to be your OWN work. You may not work in teams or groups. However, you can certainly get advice, input, information, help, or anything else from any source you deem appropriate.

Grading

Here is the point breakdown:

100 points and 5% of final grade - proposal
100 points and 10% of final grade - presentation
100 points and 15% of final grade - draft of final report focusing on intro, background, etc.
100 points and 20% of final grade - final report

Total: 400 points and 50% of final grade

What I will be looking for:

- Proposal

    - adhere to page requirements
    - reasonably challenging problem which can be accomplished in the semester
    - concise description, easy to understand, compelling problem

- Presentation

    - I will provide a rubric which I will use to grade each presentation. This will be given in Canvas

- Paper

    - adhere to page limits
    - adhere to formatting requirements (please indicate somewhere on your paper what formatting requirements you followed)
    - easy to understand description of the research problem and your proposed solution
    - good introduction (context, context, context!)
    - sufficient number of citations/sources
    - results are presented clearly (plots, graphs, tables, etc.)
    - I will provide a clearer rubric that I will use to grade the papers

Proposal

Write a 2 page description (excluding citations) of your proposed project. Include major citations, the gist of your research problem, and some brief explanations about how you will apply CPS techniques to your problem.

Presentation

23 minutes total:

- 20 minutes - presentation
- 3 minutes - questions (conference-style)

We will have presentations the last 4-5 days of class (depending on time). I will provide a clear rubric I will use to grade the presentations.

Paper

The paper should have the following specifications:

- 6 pages minimum and 8 pages maximum, excluding references
- Formatted according to whatever major society/organization/club/etc. you generally ascribe to. This could be IEEE, ACM, AIAA, ASM, etc.
- **At least 10 citations** to archived, peer-reviewed papers in your research area
- I will also provide a rubric for the final paper on Canvas so keep a lookout for that for a more detailed description of what I expect