CSCI 570 Computer Simulation

Project Proposal Guideline

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ABSTRACT

This is the project guideline for CSCI 570 Computer Simulation class at Virginia State University.

Keywords

Computer Simulation; Class Project Proposal;

1. INTRODUCTION

This guideline documents the minium requirement for *project proposal.* for the *CSCI 570 Computer Simulation* class. Computer simualtions must be a major component of the project. Following [3], this guideline is prepared.

2. THE CONTENT OF PROJECT PROPOSAL

An acceptable project proposal must contain following sections.

- Problem statement. Answer the following questions.

  - What problem will this project address?
  - What is the context of the problem?
  - Why is the problem important?
  - Who will benefit when the problem is solved?

- Proposal. Answer the following questions.

  - What is the basic approach, method, idea or tool that you suggest to solve the problem?

- Hypotheses. Answer the following questions.

  - What exactly are the expected effects of the proposed solution?
  - Are there any plausible alternatives solutions to the problem and what are they?
  - When the proposed solutions and alternatives are compared, what is the comparison result, anything good or bad about them?

- Simulation Design. Describe the design of the simulation method. Although the design may still be under development, the more concrete you can present your design, the more likely you will be successful in the class project.

  - What are the goals and objectives of the simulation?

  - What is the conceptual model, e.g., what are the state variables, how are they interrelated, and to what extent are they dynamic, which state variables are important, which are not important and can be ignored?
  - What is the specification model?
  - What is the computational model or the algorithm of the simulation?
  - How will you verify and validate the model?

- Experiments. Describe the experiment design using the simulations, e.g., how are the simulations and the experiments designed to test the hypotheses?

- Results. How will the simulation results confirm (or deny) the hypotheses? Why will the results be believable?

- Threats to Validity.

- Related Work. What have others done already? What did they learn?

- Feasibility and Project Plan. For how long, do you estimated that you need to work on the project to complete the project? What additional equipment or other resources will be needed?

- Summary.

- References. Literature cited should be listed in the references.

3. STYLE GUIDE

An acceptable project proposal must be formated following either the current *ACM SIG Proceedings Templates* [1] or the current *IEEE Manuscript Templates for Conference Proceeding* [2].

4. REFERENCES

[1] ACM. ACM SIG proceedings templates. https://www.acm.org/publications/proceedings-template, retrieved on February 1, 2016.

[2] IEEE. IEEE manuscript templates for conference proceedings. http://www.ieee.org/conferences_events/conferences/publishing/templates.html, retrieved on February 1, 2016.

[3] John Wilkes. CSP project startup documents. Technical Report HPL-CSP-90-42, HP Laboratories, October 1990. http://www.e-wilkes.com/john/papers/HPL-CSP-90-42.pdf, retrieved on February 1, 2016.