

Project Proposal

PROJECT TITLE

15-816 Modal Logic
AUTHORS

March 30, 2010

Abstract

A short abstract, summarizing the proposed project, 200 words or fewer. The proposal, excluding references, should be 5–10 pages and conform to this format. If there is additional supporting material, say, more examples or a partial implementation, please provide a URL and sketch what is there. The deadline for the white proposal is **Thursday, April 15, 2010**. Proposals will be graded.

1 Introduction

The introduction should provide motivation, clear problem statement, and brief sketch of the most relevant prior work with citations. The introduction should be accessible to anyone in the class, and should not expect too much background knowledge. This is especially true if the white paper applies modal logic in your own area of research.

2 Project Description

Describe the proposed research. This may include additional background, examples of the problem and proposed solutions, and partial results obtained so far. Be explicit about how you plan to approach the problem and what is novel about it compared to prior work. If you have conjectures or plan to prove certain theorems, state them as clearly as possible. If you plan an implementation, sketch its functionality and justify your implementation language. If you propose a logic or language design, sketch the properties you expect to hold (even if you do not plan to prove them) and

the kind of properties or programs you would like to express. Examples are a useful device in illustrating what you propose; use them liberally.

3 Expected Outcome

Detail the expected outcome of the project. Summarize here any theoretical results, language designs, implementations, or other artifacts you intend to produce. It is important to delineate the scope of the proposed project, so you should also explicitly mention what you do not plan to address. For example, you might state that you wish to produce a design but not an implementation, or an implementation but not a correctness proof for it.

You should also explain how you would assess the outcome of your project. For example, you might consider the range of properties a logic can express, or the kind of metatheoretic properties you can prove, or the completeness or speed of an implementation.

A proposal is not a binding contract, and research is unpredictable by nature, so this section should represent your best guess. If there are contingencies they should be spelled out to the extent you can anticipate them.

A project report is a required outcome for every group. If you believe that a paper might result from the work, give some potential publication venues.

4 Conclusion

Summarize the proposed project, now that its technical basis has been explained, and point to some potential future work (even if you do not plan on carrying it out yourself).

5 References

Give the references in the usual BibTeX format.