

Writing a Project Proposal

Overview

A proposal is often the first 1/3 of a project report, with the main sections of:

- Introduction
- Background and Related Work
- Methodology
- Timeline
- References

Heilmeier's Catechism

In general, a good proposal should be able to answer Heilmeier's Catechism (credit George Heilmeier). To paraphrase:

- Problem statement: What are you trying to do? Articulate your objectives without jargon.
- State of the art: How is it done today, and what are the limits of current practice?
- Novelty in approach: What's new in your approach and why do you think it will be successful?
- Impact: Who cares? If you're successful, what difference will it make?
- Cost/Benefit: What are the risks and the payoffs? How much will it cost? How long will it take?
- Milestones: What are the midterm and final "exams" to check for success?

Note, some/most of these will be addressed in the proposal, but will probably not be in the above exact order.

Approach

Generally, outline the proposal - basically, provide sections and subsections with bullets for content and order for each. When ready to write, see the individual "one-pagers" for each section.