

ALLEGHENY COLLEGE  
DEPARTMENT OF COMPUTER SCIENCE

Senior Thesis Proposal

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Proposal Title

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by

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ALLEGHENY COLLEGE

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COMPUTER SCIENCE

Project Supervisor: **First Reader**  
Co-Supervisor: **Second Reader**

September 10, 2019

# Abstract

## Proposal Title

Provide a concise summary of your proposed research of approximately 250 words. Remember that the abstract is *not* an introduction, it is a *summary* of the entire document. It makes sense to wait to write the abstract until the rest of the document has been written.

## Template Overview

It is part of the student's training in research to prepare a concise, rigorous, and scholarly thesis proposal and present it in the correct format. There is no strict length requirement for the senior thesis proposal. It is anticipated that most students will need about twenty pages of text to adequately explain the motivation and goals of their project, review the relevant literature, and describe the feasibility of the proposed work. However, concise proposals are also encouraged.

You should first modify the documents in the preamble, things that appear before the main text as detailed below.

**Front page:** use the one provided in this template, after changing the values like names in the file `preamble/mydefinitions.tex`.

**Abstract:** There should be a single paragraph of about 250 words, which concisely summarizes the entire proposal, written in the file `preamble/abstract.tex`.

The main text of the proposal should be store in the "SeniorThesisProposal.text" document. The following descriptions are sections that must be included in the proposal.

## Introduction

This section should include a statement of the problem, the overall aims, and the background motivating your research. Whenever possible, you should use one or more concrete examples and technical diagrams.

## Related Work

This section should include the review of relevant existing work (literature review). The literature review should be a concise, scholarly review of the literature explaining the background to the proposed research. The review should provide the context for the aims of the proposed research in relation to existing work on the topic.

## Method of Approach

This section should answer the "how" question - how will you perform the proposed research. It should also describe the feasibility study you have conducted to demonstrate that your project is feasible. Use technical diagrams, equations, algorithms, and paragraphs of text to describe the research that you intend to complete. Be sure to number all figures and tables and to explicitly refer to them in your text.

## Evaluation Strategy

This section should explain what steps you will take to evaluate your proposed method. If you intend to conduct experiments, then you must clearly define your evaluation metrics.

## Research Schedule

This section identify the main phases and tasks of your research project and set deadlines for when you will be able to complete each of these items. Please remember that you should aim to complete the project before the middle of March.

## Conclusion

Provide a summary of your proposed research and suggest the impact that it may have on the discipline of computer science. If possible, you may also suggest some areas for future research.

**Bibliography:** The bibliography should include all references cited in the text (as [?]) and it should not include references that have not been cited. ACM referencing style should be used when preparing the bibliography. We recommend using BibTeX or BibLaTeX and using the file `preamble/bibliography.bib`.