

Synopsis Template

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Abstract

This is a template (proposal) for your synopsis. This synopsis outlines the key contents of a synopsis, and as a result presents itself as a template for a synopsis.

Chapter 1

Motivation

This synopsis is organized in the same manner as we expect your synopsis to be. That is, use the headers as a template for your synopsis.

The motivation for your work should be communicated as one of the first things. Why is this interesting to you; why is it interesting for third party (university, your company, fellow students, etc.)?

Be sure also to include some background for the project that allows us to understand the context.

A synopsis should be from two to four pages in length. As a synopsis in this context is a shortened form or summary of the full work you gradually transform your synopsis into the final report.

Chapter 2

Hypothesis/Problem statement

Describe the problem that your project work is focusing on. Try hard to come up with a 5-10 line hypothesis that you are capable of confirming or falsify. It is no problem to state a problem in half a page, and no-one will notice that it is ill-defined (not even yourself!) However, forcing yourself to write it in five lines only, requires lot of precision that will force you to define your project much more accurately.

You may also express it somewhat broader as a problem statement (still short!), but ensure that it is in a form where you can argue/demonstrate that you have analyzed and evaluated the problem.

A fine “problem” in a teaching context is also to apply theory in practice and learn about its advantages and short-comings.

An important part of this section is also assumptions and delimitations. What assumptions do you have about the project, the process or the environment? What subproblems do you not address or will not address? Almost any project is capable of consuming an infinite amount of work and you do not have unlimited time and resources at hand—therefore it is important to explicitly delimit the problem and state what you intend to look into and what not.

A final thing is characterization: ensure that all the concepts you use are well-defined or else give a definition. We know what ‘object’ means in the usual sense, but a term like ‘component’ still has many different meanings! Which one do you use? Also if you use company specific concepts, be sure to define them as precisely as possible.

Use typography to make definitions and problem statements stand out in the text. It is more difficult to overview a text where important points are written inside large chunks of less important text than it is to find them as

Use typography to make important points like definitions, results, problem statements, and other text that needs to be consulted often, stand out in the text.

Chapter 3

Method

How do you intend to analyse the problem? What theory, books, and papers have you read that help you to analyse, discuss, and work with the problem?

A short summary of how you are going to confirm/falsify the hypothesis: what prototypes do you expect to build, how will you evaluate and measure them, what techniques and tools are you going to use, which people will you interview, how will you document processes and products, how will you record your progress, how will you analyze your work, how will each phase contribute to validating the hypothesis?

Chapter 4

(Expected) Analyses and Results

This is the main body of your report where you outline what you have done, how it contributes to analysing the problem, the results of your work, argue why your results are correct, relate them to theory, and document what has been achieved.

Remember that designs are often best described and supported by diagrams and central algorithms are best expressed in small fragments of real or pseudo code. Text like “the server calls the ‘update’ method which next calls the ‘IAmBored’ method in the ...” are terrible and next to impossible to read.

Avoid narrative writing styles like “then we did X but it did not work, so we tried Y and it worked better”. Rather, use a (problem, analysis, solution) format: “Problem: (describe short and precisely), Analysis: (describe a set of problem solutions), Solution: (describe and argue why a given solution was chosen).”

Remember that the primary objective with your report is to demonstrate that you master the theory introduced in the course and your analytical skills to “think clever thoughts” and relate and discuss your work. It is not to program a polished product ready for shipment.

Chapter 5

Related work

[This section may be put in front of the hypothesis section or integrated into the method section, if it make the flow of text more natural.]

In this section you outline what literature and other work your project build upon: papers, books, links to webpages, tutorials, etc. All references should be resolved in the reference section, that is do not use footnotes, or put the reference directly in the text. For an example, look how references are cited in Bardram et al.[1].

It is good to address how your work extends, use, or build upon the cited work.

Chapter 6

Conclusion

Your synopsis should clearly state: abstract, motivation, hypothesis, method, and (expected) analyses and results.

Chapter 7

AI Usage

[Shortly outline the group's/individual's use of AI tools like ChatGPT, Claude, etc. on tasks related to the completion of experiments, design, and report:]

- *Code Generation:*
- *Grammar and sentences: ...*
- *Clarification of Technical aspects: ...*
- *...*

Bibliography

- [1] J. E. Bardram, H. B. Christensen, and K. M. Hansen. Architectural Prototyping: An Approach for Grounding Architectural Design. In *Proceedings of Fourth Working IEEE/IFIP Conference on Software Architecture (WICSA4)*, 2004.