TECHNISCHE UNIVERSITÄT
KAISERSLAUTERN

University of Kaiserslautern

Fachbereich Informatik
Department of Computer Science

Master Thesis

Example Title:
Example Subtitle

Example Author

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Supervisors: Prof. Dr. My Example Prof
Dr. My Example Dr

Abstract

This is a skeleton of my master thesis. It includes a quite common structure and some details on how to use it in the Introduction.

On this page you can see an abstract. It shall be short (max. 1 page) and give an uninterested reader a clue what this whole work is about. Why do you think your work is needed? What is your main contribution?

Again: make it short!

Contents

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Listings

1. Introduction

Start with a motivation. What is the problem? What is it part of? What is the exact problem you want to solve in your work? What is the benefit of solving it? How do you solve it (sketch only)?

1.1. About This Skeleton

This skeleton tries to guide you in finding a good structure for your thesis and help you to represent it in LaTeX.

You should be aware of the fact that each field of computer science comes with its own "default structure" for a thesis. The default structure of your thesis has a very central purpose for your reader: quickly finding the relevant parts and getting an overview. I heard arguments for not following this default structure, because it is boring. I don't care, it's not a novel or a story you're writing, you're focus lies on quickly exposing information to your reader.

If I was to read (not necessarily grade) your thesis I would read it like this (pretty much like a paper):

Abstract (What is it about? What are the central ideas? Do I care/need this?)

Table of contents (Short glimpse where to expect what)

Intro (Search for main contribution and "why?")

skip over the thesis in large steps while going to the conclusion (Just for orientation)

Conclusion (Does it work, problems solved, future work, discussion)

References (Do you cite key papers in the area?)

Evaluation (Is the evaluation sound? does it really work?)

Related work (What is related? how does your approach differ?)

Main parts (Details on how you solved things)

Foundations (Only if referred to from main parts and things are unknown to me)

In any of these steps i would stop if i lost my interest. This probably doesn't count for someone grading your thesis as (s)he has to go on anyhow, but probably these still are the first steps (and the last two are reading the work completely).

As mentioned before every subfield of computer science seems to have its own structure. Math works look quite different from software engineering works and implementation works look different as well. Still the main structure can often be found maybe with different names (e.g., evaluation might be called complexity analysis...).

So let yourself be guided by this skeleton, try to find something for each of the chapters and possibly rename them according to your needs. And last but not least: Make sure to check back with your supervisors in an early stage e.g., after a first "extended outline" (mainly chapters, sections, subsections and `\redlines`), before wasting a lot of time for nothing.

1.2. Structure of this Thesis

Briefly explain the structure of the thesis. If you have a process overview, include a picture showing the whole thing (better than a thousand words). Explain which part of the picture is explained where leading do your evaluation and conclusion.

2. Foundations

A chapter for (mathematical) foundations and background knowledge your audience will need.

2.1. What Belongs Here?

While writing this section usually teaches you a lot (as you have to explain the concepts you are using), keep in mind that this is not your actual work. This chapter should be as short as possible, brushing up on things which are essential for your work.

2.2. What Does Not

Do not forget that your reader usually is a computer scientist, so please do not re-explain too simple things here.

3. Related Work

This is an important chapter and it is different from Chapter 2.

While you focus on what things a reader should know to understand your work in the previous chapter, this chapter focuses on previous work which is (very) close to the problem you want to solve.

Maybe previous authors nearly solved the problem you want to solve or maybe they solved in a different way. Mention such works here (e.g., [Bush, 1945]) and tell the reader what makes your work special. Show the differences, how is your approach better or worse?

3.1. Structure

If you're combining works from several fields, why not structure them into Sections?

4. Mainpart

This is just a dummy chapter for all the main chapters of your thesis, so the actual content of your work.

Usually it's a poor choice to just have one main chapter and a huge number of sections. Also you don't name the Mainpart Mainpart, give these chapters speaking names. Remember Section 1.2.

5. Evaluation

Evaluate your approach. Compare it to others (Chapter 3), give us stats, etc.

If your work is more theoretical you might want to rename this section to Analysis and for example include the complexity analysis in here.

6. Conclusion

Conclude your work. Summarize the results and findings, perhaps discuss the evaluation results here and say what is left to be done.

6.1. Summary

6.2. Open Questions and Future Work

Bibliography

Bush, V. (1945). As We May Think. Wiley-Blackwell. URL `http://www.theatlantic.com/magazine/archive/1969/12/as-we-may-think/3881`.

A. More information about Foo

B. More information about Bar

B.1. Detailed List of Evaluation Results

You get it.

Acronyms

CURIE	Compact URI[1]
LD	Linked Data[2]
LOD	Linking Open Data[3]
MSE	Mean Square Error
OWL	Web Ontology Language[4]
RDF	Resource Description Framework[5]
RDFS	RDF Schema[6]
SPARQL	SPARQL Protocol and RDF Query Language[7]
SKOS	Simple Knowledge Organization System[8]
URI	Uniform Resource Identifier[9]

[1] `http://www.w3.org/TR/curie/` (last accessed: Jan. 23rd, 2011)

[2] `http://esw.w3.org/topic/LinkedData` (last accessed: Jan. 23rd, 2011)

[3] `http://esw.w3.org/SweoIG/TaskForces/CommunityProjects/LinkingOpenData` (last accessed: Jan. 23rd, 2011)

[4] `http://www.w3.org/TR/owl-ref/` (last accessed: Jan. 23rd, 2011)

[5] `http://www.w3.org/RDF/` (last accessed: Jan. 23rd, 2011)

[6] `http://www.w3.org/TR/rdf-schema/` (last accessed: Jan. 23rd, 2011)

[7] `http://www.w3.org/TR/rdf-sparql-query/` (last accessed: Jan. 23rd, 2011)

[8] `http://www.w3.org/2004/02/skos/` (last accessed: Jan. 23rd, 2011)

[9] `http://tools.ietf.org/html/rfc3986` (last accessed: Jan. 23rd, 2011)

Erklärung

Hiermit erkläre ich, dass ich die vorliegende Arbeit selbstständig verfasst und keine anderen als die angegebenen Hilfsmittel benutzt habe. Die Stellen, die anderen Werken dem Wortlaut oder dem Sinn nach entnommen wurden, habe ich durch die Angabe der Quelle, auch der benutzten Sekundärliteratur, als Entlehnung kenntlich gemacht.

Kaiserslautern, den 1. April 2011 __________________________

Example Author