

EVALUATING FEATURE ATTRIBUTION METHODS

Benedict Gattas

June 2020

*School of Information Technology and Electrical Engineering,
The University of Queensland*

*Submitted for the degree of
Bachelor of Engineering
in the field of Software Engineering.*

Benedict Gattas
benedict.gattas@uqconnect.edu.au

June 10, 2020

Prof Amin Abbosh
Acting Head of School
School of Information Technology and Electrical Engineering
The University of Queensland
St Lucia, Q 4072

Dear Professor Abbosh,

In accordance with the requirements of the degree of Bachelor of Engineering (Honours) in the division of Software Engineering, I present the following thesis entitled “Evaluating Feature Attribution Methods”. This work was performed under the supervision of Dr Alina Bialkowski.

I declare that the work submitted in this thesis is my own, except as acknowledged in the text and footnotes, and has not been previously submitted for a degree at The University of Queensland or any other institution.

Yours sincerely,

Benedict Gattas.

Acknowledgments

Acknowledge your supervisor, preferably with a few short and specific statements about his/her contribution to the content and direction of the project. If you collaborated with another student, acknowledge your partner's contribution, including any parts of the thesis of which s/he was the principal author or co-author; this information can be duplicated in footnotes to the chapters or sections to which your partner has contributed. Briefly describe any assistance that you received from technical or administrative staff. Support of family and friends may also be acknowledged, but avoid sentimentality—or hide it in the dedication.

Abstract

This document is a skeleton thesis for 4th-year students. The printable versions show the structure of a typical thesis with some notes on the content and purpose of each part. The notes are meant to be informative but not necessarily illustrative; for example, this paragraph is not really an abstract, because it contains information not found elsewhere in the document. The \LaTeX 2 ϵ source file (`skel.tex`) contains some non-printing comments giving additional information for students who wish to typeset their theses in \LaTeX . You can download the source, edit out the unwanted material, insert your own frontmatter and bibliographic entries, and in-line or `\include{}` your own chapter files. Of course the content of a particular thesis will influence the form to a large extent. Hence this document should not be seen as an attempt to force every thesis into the same mold. If in doubt about the structure of your thesis, seek advice from your supervisor.

Contents

Acknowledgments	v
Abstract	vii
List of Figures	x
List of Tables	xi
1 Introduction	1
2 Literature review / prior art	2
3 Theory	3
4 Methodology	4
5 Results	5
6 Discussion	6
7 Conclusions	7
7.1 Summary and conclusions	7
7.2 Possible future work	7
Appendices	8
A Dummy appendix	9
B Program listings	10
B.1 First program	10
B.2 Second program	10
B.3 Etc.	10
C Companion disk	11

List of Figures

List of Tables

Chapter 1

Introduction

The introductory chapter describes the importance of the field and the scope and significance of your project. It usually ends with an overview of the remainder of the thesis.

Notice that Arabic page numbering begins with Chapter 1. Preceding pages (known as “frontmatter”) have Roman numbering. The `book` document class in L^AT_EX follows this numbering convention by default (see Lamport [1], p. 80).

Chapter 2

Literature Review

You will need to review previous work in the field, which may include books and papers (“literature”), patents and commercial products (“prior art”), and earlier work in your Department. This information is usually (but not always) collected in a single chapter, whose title should preferably be more specific and interesting than the one above.

Chapter 3

Theory

A scientific paper is likely to be read by people who are not specialists in the same field as the author(s), but who nevertheless may need to use the results of the paper in their own fields. Similarly, the examiners of your thesis will probably include at least one academic who does not teach or conduct research in the subject area of your thesis. In an early chapter of your thesis, therefore, you should quote any theoretical results which are necessary for the understanding of later chapters. Examiners who are not specialists in your area will know whether you have given sufficient theoretical information. They will also know whether you have insulted their status by presenting material which is familiar to every half-competent graduate in every field of ECE.

Chapter 4

Methodology

Procedure, design, etc. This may be one chapter or several. Again, titles should be more informative than the above.

Chapter 5

Results

Chapter 6

Discussion

Chapter 7

Conclusions

7.1 Summary and conclusions

7.2 Possible future work

Appendix A

Software Documentation

Notice that appendices are “numbered” with capital letters, not numerals. When the `\appendix` command in L^AT_EX [1, p. 175] is used with the `book` document class, it causes subsequent chapters to be treated as appendices.

Appendix B

Software Descriptions

B.1 Attributer Class

Text

B.2 Evaluator Class

Appendix C

Software Repository Link

