

MASTER THESIS - INTRODUCTION

Mattias Villani

**Statistics and Machine Learning
Department of Computer and Information Science
Linköping University**

ADMISSION REQUIREMENTS - THE HARD FACTS

- ▶ You must have passed (grade A-E) every compulsory course within the study program.
- ▶ You must have passed at least 65 ECTS credits in programme courses.

A MASTER THESIS IS A COURSE

- ▶ Successive deadlines and compulsory moments:
 - ▶ Thesis proposal seminar
 - ▶ Mid-term report
 - ▶ Revision meeting
 - ▶ Defence seminar
- ▶ Omission to adhere to these moments may lead to that the examination of your work will be postponed to next term!
- ▶ Supervisors and examiners have been appointed to that term in which you are supposed to complete your work.
- ▶ You shall act as opponent on another thesis and that should be done according to the schedule.

PART 1 - PROBLEM FORMULATION AND LITERATURE REVIEW

- ▶ Time frame: Now - Project Proposal Seminar.
- ▶ Make a careful review of the **background** to your problem, **available data** and the **specific questions** put by the commissioner.
- ▶ **Put your work in a scientific context**
 - ▶ Has anyone studied your kind of problem previously?
 - ▶ Are there studies of similar problems?
 - ▶ What lessons can be learnt?
 - ▶ What is new in your study?
 - ▶ **Why** did you choose a certain model/method/algorithm?
- ▶ Google! Google! Google!
- ▶ Write a first draft of background, your preliminary objective, description of data and literature review.
- ▶ Prepare for your **Thesis Proposal Seminar** (oral with slides). This shall include suggestions of methods. 20 minutes presentation. Be very concise!

PART 2 - MAIN WORK, FIRST PHASE.

- ▶ Time frame: Project Proposal Seminar - Mid-term Seminar.
- ▶ Amend your thesis proposal taking aspects from the proposal seminar into account.
- ▶ Work with your project.
- ▶ Adhere to regular supervision
- ▶ Write draft pages containing results and analysis of these
- ▶ Towards the end of the period, prepare for the Mid-term report seminar:
 - ▶ Short written summary of your progress so far
 - ▶ Oral presentation with slides

PART 3 - MAIN WORK, SECOND PHASE.

- ▶ **Time frame:** Mid-term Seminar - Revision meeting
- ▶ Take aspects from the mid-term report seminar into account.
- ▶ Prepare the skeleton of your final theses and include the parts that are already written.
- ▶ Finalize your analyses and complete the results part of your thesis.
- ▶ Finalize the methodology chapter and the reference list of your thesis.
- ▶ Put strong effort on writing a good discussion part. It should comprise several pages.
- ▶ Formulate your conclusions.
- ▶ Write a summary (max. 1 page) of your thesis and provide a title.
- ▶ Prepare the final manuscript to the Revision meeting.

PART 4 - FINALIZING

- ▶ Time frame: Revision meeting – Final submission of thesis.
- ▶ Review the thesis for which you have been appointed as opponent. Prepare for the Revision meeting.
- ▶ The Revision meeting is a closed seminar, where the author (respondent), the opponent, the supervisor and possibly another teacher take part. The purpose of the meeting is to go through everything in the manuscript that is objected to criticism.
- ▶ Part from the discussion made, the opponent shall provide the respondent with a written list of major issues and a written list of language errors (alternatively a version of the thesis where the language errors have been marked)

PART 4 - FINALIZING, CONT

- ▶ Make revisions in your own thesis according to what has been taken up by your opponent (and your supervisor)
- ▶ Prepare your final manuscript for the Defence seminar.
- ▶ Prepare a good presentation for the Defence seminar.
- ▶ Check the revisions made in the thesis on which you are the opponent. Prepare discussion points for the Defence seminar.
- ▶ Perform on the Defence seminar both as presenter and as opponent!
- ▶ Consider the discussion of your thesis during the Defence seminar and revise your manuscript accordingly.
- ▶ Submit your very final manuscript in which you have included:
 - ▶ library sheet URL
 - ▶ copyright page from LiU Electronic Press

SCHEDULE

- ▶ January 23, 2018 (Today): Course start.
- ▶ February 12, 2018: Thesis proposal seminars
 - ▶ Each student presents their thesis topic (including data description suggested methods) and outline for the work. 20 minutes per thesis including questions.
 - ▶ Expected outcome: Each course attendant and tutor should have been informed about and understood the objectives of the thesis projects
 - ▶ **Compulsory** to attend!

MID-TERM REPORT

- ▶ March 29, 2018.
- ▶ Each student presents their progress so far. 25 minutes per thesis including questions.
- ▶ A two-pages written summary of the progress should accompany the presentation.
- ▶ Expected outcome: Each course attendant and tutor should have been informed about what has been done so far and what is left to do for each thesis project.
- ▶ **Compulsory** to attend!

REVISION MEETING

- ▶ May 10, 2018: Deadline for submitting manuscript to opponent and supervisor in front of revision meeting.
- ▶ May 17 (approx), 2018: Revision meetings.
- ▶ The opponent has one week (from May 10 until May 17) to read the manuscript and prepare an oral and written review.
- ▶ The scheduling of the meeting is made in agreement between the author, opponent and supervisor.

SUBMISSION OF FINAL MANUSCRIPT AND FINAL DEFENSE

- ▶ May 28, 2018 at 12.00: Deadline for manuscript submission
- ▶ The manuscript should be sent to the opponent and to all supervisors.
- ▶ June 4-5, 2018 (full days): Defence seminar
 - ▶ Each student presents their thesis for a maximum of 25 minutes, followed by the opposition (max. 25 minutes) and a general discussion.
 - ▶ After the seminar (or in breaks) each supervisor should summarize for the student what is left to be adjusted in the manuscript.
 - ▶ **Compulsory** to attend the **whole** seminar!
- ▶ June 20, 2018: Deadline for submission of revised manuscript

SUPERVISION

- ▶ The **normal** frequency of meetings with the supervisor is every second week.
- ▶ It is mainly the student who puts “the agenda” for the meeting, i.e. you are expected to have some progress to show and to have prepared questions.
- ▶ At each meeting it is wise to agree on what are the next steps.
- ▶ You are expected to successively show progress in your report writing:
 - ▶ Start writing very early!
 - ▶ Submit manuscript parts to the supervisor in due time before the meeting (to facilitate feed-back)

GRADING

- ▶ The grading is based on:
 - ▶ The **scientific quality** of the thesis (adequacy and originality of the methods used, significance of obtained results, discourse skill) n.b. “originality” is not equivalent to the development of new methods, rather that the methods used have not previously been applied on the kind of data used.
 - ▶ **Technical quality** of the thesis (correctness of language and scientific terminology, implementation, quality of illustrations). This applies to the version of the manuscript submitted before the revision meeting and to the revisions made upon that.
 - ▶ The **degree of independence**. The supervisor gives an assessment to the examiner regarding the independence of the student during the master thesis. Listen to the supervisors advice, but do take own initiatives! (but always check with supervisor).
 - ▶ **Quality of the performed opposition**, both at the revision meeting and at the final defense.
 - ▶ **Quality of presentation and communication** (clarity of written presentation, ability to orally present, discuss and defend the thesis).