Writing a Skripsie Report

Goals of this document

To summarise useful advice for writing and structuring your skripsie report. Most of the advice here overlap very strongly with the content from Sharon Goldwater's website:

- http://homepages.inf.ed.ac.uk/sgwater/writing/content.html
- http://homepages.inf.ed.ac.uk/sgwater/writing/ug4_report.html

Read it! The things I write below are simply guidelines; there are very few hard rules when writing your report. Also, I might be wrong about certain (maybe many) things, so if you have different insights, different experiences, or other things that help you with writing your report, let me know! Here is another helpful link, which is more directed at papers, but still relevant:

- http://approximatelycorrect.com/2018/01/29/heuristics-technical-scientific-writing-machine-learning-perspective/

Structure of your report

Below, I give rough chapter headings. Again, the structure of your report will be different depending on your specific project, how you approached it, and what you focused on specifically. For instance, you might not have a "Background" chapter, but incorporate that into the separate chapters; this is especially the case if you had several separated components or aspects that you looked at for your project.

In general, I think it is important to keep things concise, keep the reader interested, and have an over-arching story. The report should start at a high level, become more detailed as you progress to the middle (the meat), and then become higher level again towards the conclusion. Every chapter, and even every subsection, can follow this pattern (to some extent at least).

Abstract

Super important! The abstract needs to summarize the entire project. There should be enough details so a reader would know whether it is worth reading your project or not. Read this: https://users.ece.cmu.edu/~koopman/essays/abstract.html. A lot of it overlaps with the introduction (below), but here you need to say *only* what is necessary to make those points (i.e., you will be super concise).

Introduction

Should answer the question: *What did you do and why should I care?* You can to this by describing the following:

- What is the problem? What is/are the goal(s) of your project?
- Give a motivation for why this problem is important.
- Describe how you solved the problem.
- Your contributions: What did you achieve? What are the results? Without giving full details, you can give the main conclusion of the work.

Background

- Describe related work, i.e. cite relevant literature.
- Keep things fairly general (but more details than Introduction).
- Very important: *Have an argument!* Don't just list a bunch of things that are related to what you did, but have a point (otherwise it get's extremely boring to the reader).
- Unpack the motivation from the Introduction a little.
- Setup the reader for the next chapter, which describes your approach.

System design / model description

I sometimes like calling this chapter "Model for solving problem X" or "System design for task X". This chapter should give all the details of your system or model. How did you tackle your problem? But don't give all the implementational details (see comments below); you can give some implementational detail, but only those that are necessary to understand the system or model.

Experimental setup / system implementation

In the previous chapter, you described your model, but you can leave out details of, for instance, what specific data set you used, or what programming language, tools, or packages you used to implement your software. All these details should be given in this chapter. After this chapter, the reader should be able to replicate your model or system (more-or-less).

Experiments

Have a story, and only include results that contribute to the point that you want to make. It is far better to have fewer experiments that make a strong point, than many experiments without a goal (this will simply overwhelm the reader).

Summary and conclusion

The conclusion is sometimes the most difficult to write, since in some way, you don't want to mention anything that you have described in detail before, but you also don't want to write anything that you haven't stated before. Really, you want to summarize the most important points: remind the reader of some awesome things that happened through the course of your report. There shouldn't be any new surprises here, or new revelations that you haven't talked about elsewhere.

I sometimes use this as a rough guideline (this is not a strict rule at all, but it helps): if the examiner reads *only* your Abstract, Introduction and Conclusion, they should have enough details to actually know (almost) exactly what you did, how you did it, and what you achieved (i.e., they should be able to give you a rough mark).