

## Guideline for writing your masters thesis (extra comments in blue)

### 1. Introduction

- **Background:** What is it that motivated your interest in this topic? Are there real applications related to the topic? What are some of the common challenges surrounding the topic
- **Problem statement:** What specific challenges do you want to address (make it clear)? How do you plan to address the challenges (explain in technical terms)?
- **Related work / State-of-the-art:** Have others addressed this same challenges (state references)? How did they do it? What is the most recent state-of-the-art on your topic? What is different with your approach (if possible, state any expected advantages)?
- **Organisation of your thesis [optional]:** A summary of how your work has been organised. [Most readers are curious to see this paragraph; it helps them to jump to what is relevant to them]
- [How well your intro. is written will determine whether someone will like to read further. This is where you sell your idea; make it attractive enough].
- [Most supervisors will keep resisting approving your thesis if this chapter isn't convincing enough]

### 2. Relevant theory

- One or two chapters describing any theoretical background relevant to to your work.
- This is where you build the vocabulary or terminology relevant to your work.
- Key concepts are defined; variables/notations are defined.
- [Some thesis style might insist on the addition of a table of notations (before intro.), in case there are too many]
- [At this level the student is almost ready to finish the work]

### 3. Methodology and Results

- One or more chapters describing the methods, algorithms, data and results obtained
- Data: Must explain clearly the type of data used, and how you obtain this data.
- Methods: A clear description of of methods or algorithms used in the work. Describe in every detail the experimental setup, step-by-step, until how the results are arrived.
- Results: State the results as clearly as possible: using tables, figures, charts and give meaningful interpretations.
- Evaluation of results. How do you measure quality of your results? Are your results comparable to any benchmark?

### 4. Conclusion

- **Conclusion:** State it as clearly as possible (leaving no nuances) [Are you for or against? No in-between. Don't confuse your readers. They need to know your conviction, your school of thought.]
- **Limitations:** What worked and what did not work? and Why?
- **Discussions:** Based on your observations, what would do differently to

get better results? What future directions do you see from what you have done?

- [Excellence of your thesis depends on on Steps 3 & 4. This is where A/B students are distinguished from the rest. It is where the supervisor is convinced that the student understood the topic].
- [It is not possible to close step  $k$  before starting step  $k+1$ . That means you go back-and-forth as things get clearer to you. Even the introduction step cannot be its best version until you're almost done. You keep refining different parts until it reaches acceptable level.
- [Writing a thesis is a continuous process. New ideas may overpower former ones, you keep updating, until the best version. You make sure there are no contradictions as you go]