HOW TO WRITE A Technical Report?

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A Simple Approach to technical report Writing:

- **Abstract** **(less than or equals to 1 page)**
- **Chapter 1: Introduction** **(~ 8% of your report)**
- **Chapter 2: Literature Review** **(~9% of your report)**
- **Chapter 3: Theory / Solution / Program / Problem**

  (~25% of your report)
- **Chapter 4: Implementation / Formalism** **(~25% of your report)**
- **Chapter 5: Results and Evaluation** **(~25% of your report)**
- **Chapter 6: Conclusions and Future Work (~8%)**

100%

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Other

- **Bibliography / References**
- **Appendix**

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Abstract (less than or equals to 1 page)

- one page stating what the technical report is about
- highlight the contributions of the technical report

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Chapter 1: Introduction (~5-10 pages)

- **technical report Statement (one or two sentences)**
  - What is your thesis about and what have you done?
  - If you have a hypothesis what is it?
  - How will you test (prove/disprove) your hypothesis?
- **Motivation**
  - Why is this problem you've worked on important
- **Goals / Objectives**
  - What are you trying to do and why?
  - How will you or the reader know if or when you've met your objectives?
- **Contributions**
  - What is new, different, better, significant?
  - Why is the world a better place because of what you've done?
  - What have you contributed to the field of research?
  - What is now known/possible/better because of your work?
- **Outline of the thesis (optional)**

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Chapter 2: Literature Review (~8-20 pages)

- Organize related work - impose structure
- Be clear as to how previous work being described relates to your own.
- The reader should not be left wondering why you've described something!!
- Critique the existing work - Where is it strong where is it weak? What are the
- unreasonable/undesirable assumptions?
- Identify opportunities for more research (i.e., your work) Are there unaddressed, or more
- important related topics?
- After reading this chapter, one should understand the motivation for and importance of your report

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Chapter 3: Theory / Solution / Program / Problem (~15-30 pages)

- continuing from Chapter 2 explain the issues
- outline your solution / extension / refutation

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Chapter 4: Implementation / Formalism (~15-30 pages)

- not every thesis or technical report has or needs an implementation

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Chapter 5: Results and Evaluation
(~15-30 pages)

- adequacy, efficiency, productiveness, effectiveness (choose your criteria, state them clearly and justify them)

- be careful that you are using a fair measure, and that you are actually measuring what you claim to be measuring

- if comparing with previous techniques those techniques must be described in Chapter 2

- be honest in evaluation

- admit weaknesses

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Chapter 6: Conclusions and Future Work (~5-10 pages)

- State what you've done and what you've found

- Summarize contributions (achievements and impact)

- Outline open issues/directions for future work

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Bibliography / References

- Include references to:
    - credit others for their work
    - o help to distinguish your work from others
    - o provide pointers to further detailed readings
    - o support your claims (if evidence can be found in others work)

- Ensure that ALL bibliographic entries are complete including: authors, title, journal or conference, volume and number of journals, date of publication and page numbers. Be careful to at least be consistent in punctuation.

- Learn how to use a good typesetting program that can track and format bibliographic references (e.g., groff, latex, frame).

- Within the text of the thesis, a reference with a number of people can be referred to as Lastname et al. (where et al appears in italics and the al is followed by a period).

- My personal view is that URL's are not valid bibliographic references. They and their contents change and they often contain material that has not been refereed.

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Appendix

- Include technical material that would disrupt the flow of the thesis.
- Included for curious or disbelieving readers

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