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A LaTeX Report Example

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Contents

Acknowledgements

This template is a slightly modified version of the one developed by Prof. Charles Duncan for MSc students in the Dept. of Meteorology. His acknowledgement follows:

This template has been produced with help from many former students who have shown different ways of doing things. Please make suggestions for further improvements.

Note

This template was originally created for a full MSc dissertation. Although I have modified the format slightly (eg there are no separate chapters), I have not substantially changed the text or the advice appearing in the LaTeXcomments (source lines beginning with %). You should therefore be aware that for a shorter report you may not need to go into as much detail as indicated here. For example, you might not need to include any acknowledgements and any reference list is likely to be very short.

1 Introduction

This should contain a description of your project and the problem you are trying to solve. Where appropriate you should also include references to work which has already been done on your topic and anything else which lets you set your work in context.

One of the things you will need to do is to ensure that you have a suitable list of references. To do this you should see [1] or some other suitable reference. Note the format of the citation used here is the style favoured in this department. Here is another reference [2] for good measure.

You will also want to make sure you have no spelling or grammatical mistakes. To help idwentify spelling mistukes you caan use the commands *ispell* or *spell*. See the appropriate manual pages. Remember that spelling mistakes are not the only errors which can occur. Spelling checkers will not find errors which are, in fact, valid words such as *there* for *their*, nor will they find repeated words which sometimes occur if your concentration is broken when typing. **There is no substitute for thorough proof reading!**

2 Previous Dissertation Review

In the introductory paragraph, clearly identify the reviewed dissertation by its Title, Author and Year.

Summarize the project in your own words.

This is just to show how to break things into sections.

Here is a padding paragraph. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb.

Does the dissertation adequately explain the context in which the problem is set?

Give evidence to support your answer based on the quality of motivation, background and previous work overview.

Here is a padding paragraph. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb.

Figure 1: The University Crest

Has the student adequately explained the scope of the problem, the approach that they would take, how success would be measured and reflected on the outcomes?

Consider limitations, reproducibility and research methods used. Give evidence to support your answer.

Quality of presentation.

Comment on the overall structure, whether the explanations were clear and easy to follow, how was the language used.

Presentation of additional information.

Discus the use of references and citations throughout the text and use of figures and tables (their design, placement and descriptions, references to from within text, etc.)

3 Background and Literature Review

I created a figure which is centred and stretched to 30% of the width of the page `{0.30\hsize}` and with the height stretched by the same amount `{!}` to preserve the aspect ratio. If you omit the extension (ie .eps, .ps or .pdf) on the file name then LaTeXwill pick up the postscript copy whereas pdflatex will automatically pick up the PDF version.

You can use a label on a figure to refer to it later: The university crest is in Figure 1. Note that you should not use phrases like "the figure above" or "the following figure" since LaTeXmay move the figure relative to the text if it cannot be fitted onto the current page.

4 Preliminary Investigations

You might want to include an equation here:

$$\delta N_\nu = (\delta N_\nu)_{ex} + (\delta N_\nu)_{au} \tag{1}$$

You might sometimes want to include equations without numbering them.

$$E = mc^2$$

You might also want to include diagrams. The example shows the use of the special command which allows existing postscript files to be included. You would normally keep your figures separate from the text. These pictures might be satellite images or postscript output from some program such as IDL, PV-WAVE, Uniras or xpaint.

More on numbering: This text is in a paragraph which is also not numbered by default and the "title" of the paragraph is not on a separate line. If you want to increase the depth to which subsections are numbered you should see the subsection on setting the secnumdepth counter in the manual.

5 Final Proposal

One way to produce simple graphs is to use gnuplot which can produce native LaTeXoutput. Graph 2 was produced using gnuplot with output designated as LaTeX; this creates a LaTeXoutput file which you can include directly or keep separate and refer to using the *include* command.

Another approach is to draw simple figures using *xfig* which allows you to export diagrams in LaTeXpicture format so that the diagram can be included directly.

Perhaps the most robust way to include graphs is to create then using whatever package you like (eg Excel) and then convert them to PostScript or PDF and include them in the same was as was done in Figure 1 for the University Crest. You can usually do this with most packages, including Microsoft ones. One trick for producing PostScript is to print to a dummy PostScript printer; for PDF you can use the free CutePDF utilities at `www.cutepdf.com`.

6 Workplan

You are likely to use tables and graphs. You can create tables easily in LaTeX.

File names	Satellite	Resolution
worldr	Meteosat	5km
worldg	Meteosat	5km
worldb	Meteosat	5km

Table 1: This is a simple table. More complicated tables can have headings which pass over more than one column

If you want to produce fancier tables than shown in Table 1 refer to the manual.

7 Risk Analysis

Here is a padding paragraph. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb.

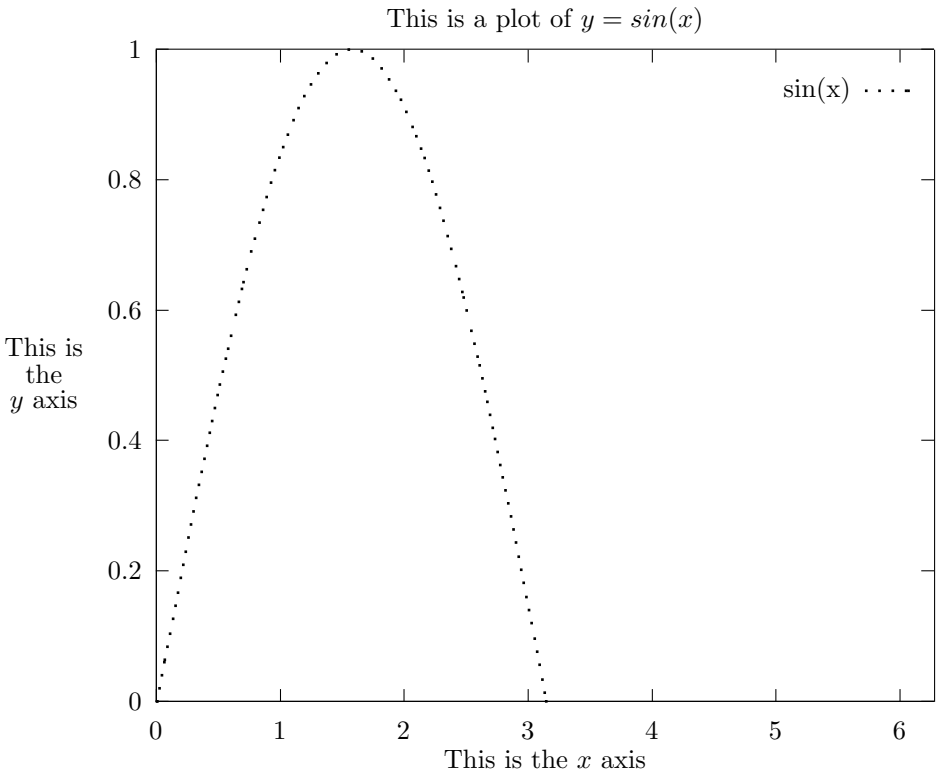

Figure 2: Simple Gnuplot example

Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb. Yet more rhubarb. Rhubarb. More rhubarb.

8 Outline of the Dissertation Report

You will probably need a numbered list here, which is rather simple in LaTeX:

1. This is top level rhubarb.
    1.1. 2nd level
    1.2. some rhubarb
    1.3. and more
2. More top level rhubarb
    2.1. other boring vegetables
    2.2. kale, for example
3. And so on

References

[1] L.Lamport. *1986 Latex User's Guide and Reference Manual.* Addison Wesley. pp242.

[2] F.Bloggs. *1993 Latex Users do it in Environments* Int. Journal of Silly Findings. pp 23-29.