MVE385: Instructions for the report

November 5, 2015

Contents

1 General

The report may be written in any word-processor, although the use of LaTeX is encouraged. There is no limit on the number of pages. The report should be as long as is required to present the project thoroughly. The format of the report should be as described below. The report and the preliminary report should be submitted as pdf files on PingPong under the corresponding assignment.

The main purpose of the report is to report your work to the external partner, so that the report could be used as reference and guide for future work. The results and conclusions should therefore be formulated with your external partner in mind, so that they are understandable and useful for them. This may limit the use of mathematical terms and equations in these parts, depending on your partners and the nature of your results.

The report is also the main part of the course assessment criteria, and should therefore describe your contributions and a thorough background to the problem, showing that you have acquired an understanding of what the project is about. Make sure that the report reflects your work. For example, if you spent a lot of time doing literature search, a large section of the report should discuss this literature; and if coding was a major part of the

project you should include detailed descriptions of the code you have written and your considerations concerning the code.

Finally, the report could be used as a basis for future projects, continuing where you left off. Therefore, it is important to include enough theory and introduction so that someone with similar background as yourself could be easily introduced to the project and will not have to repeat your work. Imagine that you would continue the project in two years, when you most likely have forgotten the details. What would you like to read then? This situation is often the case when working with real-life projects, especially as consultant but also as employed in both industry and academia.

2 Contents

The report should contain the following sections

1. *Title page* with project title, your names, e-mails, the name of the course, names of supervisors/partners.

2. *Abstract.* Short abstract describing the project and your main results, without being too technical.

3. *Table of contents* with section headings.

4. *Introduction*/Background. Background and purpose of the project.

5. *Theory.* Any mathematical models and necessary background theory used should be presented, explained and/or derived here. This part may be rather technical as only the interested reader will dig into it.

6. *Implementation.* An optional implementation section may be added to describe implementation details and choice of algorithms, etc.

7. *Results.* Your results, with figures, tables with data, etc., presented in a clear and readable manner.

8. *Discussion*/Conclusions. Discuss your results: limitations, applicability, directions for future work, challenges, etc. Conclude your project: was it successful? If not, why?.

9. *Acknowledgments.* If you want to thank someone in particular for their help (other than your supervisors).

10. *References.* You should include at least two references. See below.

11. *Appendix.* Include the essential parts of your computer code. Also include your *intellectual assets inventory.*

Section titles could be modified to suit the project, but the essence of all the sections should be present. Subsections should be used as appropriate. All sections (and subsections) from *Introduction* to *Discussion* should be numbered for easy reference. Appendices should be numbered using Latin letters (A, B, ...).

3   Spelling and grammar

The report should be spell-checked to avoid simple spelling mistakes. American or British spelling is up to you, but be consistent.

The grammar should also be thoroughly checked. Strive to use a language suitable for scientific publications. In particular, use passive voice as much as possible. That is, avoid text of the kind "First we did A, then we did B." and use something similar to "Initially, A was performed. Then, B was studied.".

4   Equations

All equations should be numbered, and referred to in the text with numbers within parentheses, such as (3), or (2.3) if equations are numbered with their section number first (optional).

The use of LaTeX is encouraged to make the equations look nice, but equations written using for example the equation editor in MS Word are acceptable.

5   Figures and tables

Figures should be clear and readable, with large enough text in graphs and plots. Make sure the resolution of any images is large enough to look good in print, at least 300 dpi (dots per inch). The use of color is encouraged when it enhances the readability, but try to make sure the figures could be read in grayscale print as well (e.g. by using dashed lines to distinguish lines with similar-looking colors).

All figures and tables should have a caption describing the contents of the figure in a self-contained way. Most readers look at the figures first, before reading the running text, and should be able to understand from the caption what the figure shows. If multiple figures have similar or related content, they could either be grouped into one figure (figure 1 a), b), c), say, with clearly labeled sub-figures), or their captions should all contain similar information so that each figure is self-contained.

6 References

References should be cited in the text with a number within square brackets, such as [1]. You should include at least two relevant references. References to web pages should be avoided, unless they refer to web resources such as databases and similar - in that case the reference should include the date of access.

The list of references can be formatted using any style, as long as it is consistent.

When using LaTeX, the use of BibTeX for handling references is encouraged.

7 Preliminary report

The preliminary report submitted for evaluation in advance should contain an outline of the full report, indicating which sections and results are intended to be present. If the figures are not ready, write a caption for an empty figure describing the intended content.

The purpose of the preliminary report is for you to get feedback on the report before the final submission, especially regarding the extent and results. The more the preliminary report contains, the more feedback you can get.