CMEE Masters: Miniproject Assessment

Assignment Objectives: To address on a model-fitting problem using computational methods, and produce a written report, all in a coherent, reproducible, modular workflow under version control.

Student's Name: David Bridgwood

Overall Project Organization

All the directories were in place, no clutter. Good.

You had a `readme` file listing the key files. The instructions for how to run the project code were explicit. You also listed packages needed / dependencies (and mentioned what these packages are for), and the R/Python versions used for code development. Overall, very good!

But what's with "**Description:** words..."?

There was a meaningful `.gitignore`, but also one in the upper level directory — why?

The choice of coding tools and packages was good. The number of packages you used in the project was appropriate (too many packages is not good for reproducibility).

You could have put the writeup LaTeXsource files and pdf in a separate directory – this is what you should aim to do for your final dissertation, I think.

Overall the project organization was clean and logical — very good job!

The Code

The code was nicely compartmentalized into separate scripts, with a reasonably logical use of Python vs. R. Each script was neat and well commented (with appropriate use of docstrings for python).

Running the project script worked fine, right down to the LaTeXreport compilation.

Remember, you should write into your workflow commands that will delete all existing output files every time the workflow is run (they should be re-generated afresh). Also, put in checks so that the computational workflow aborts if any step in the analysis gives an error.

The script did run a bit slowly. Consider what you could have done to speed it up.

There were messages displayed on the terminal about the progress of the workflow. nicely done.

Overall, very good.

The Report

(More specific feedback in the attached pdf)

Your report is overall very well written. You were explicit about your objectives and hypotheses, and provided clear answers to them — good.

To the extent possible, consider using a more results-focused title for your main dissertation — basically, the main finding(s) of the paper can be indicated in the title. Obviously, if you have a lot of findings, you can't do that. But then, it means you have too many "storylines" in your study.

The presentation was good. You provided a title page, as asked.

The Introduction gave a good context.

The Methods were generally well explained.

Good job splitting the text into sections and subsections, really helps. The use of references and bibtex was good, specially in the introduction. You should have used a few more references in the discussion to support your results.

The Figures were good – especially fig 3. Figure and Table captions need legends (or in the case where they were present, better ones) to explain what's going on and deliver the take-home message(s).

Excellent work overall.

Overall Assessment

50/50 Computing/Report weightage for the marks here.

Marks for the project and computational workflow: 90

Marks for the Report: 80

Overall Marks: 85

Signed: Samraat Pawar

June 8, 2018

Notes on Assessment :

- This written feedback will be discussed in a 1:1 session scheduled after this assessment has been been given to you.
- The coursework marking criteria (included in this feedback at bottom) were used for both the computing and report components of the Miniproject Assessment. *In contrast*, Your final dissertation project marks are going to be based pretty much exclusively on the written report and viva (not code). Expect your final dissertation report to be marked more stringently, using the dissertation marking criteria (also included in this report).
- In many cases, the marker would have contrasted what you have done with what you should do in an actual dissertation. This does not mean that you were penalized — one of the goals of the miniproject is also is to provide feedback useful for your main dissertation. However, there may be cases where what you have done is just bad practise (for example missing line numbers), irrespective of whether it is a mini- or main- project report – you will be penalized in that case.
- The markers for this assessment are playing the role of somebody trying to understand and use your project organization and workflow from scratch. So it will seem like the feedback is particularly pedantic in places — please take it in the right spirit!
- Ultimately, keep in mind that this mini-project was partly an exercise in reproducible workflow development — you may need to trade-off some computational elegance (but hopefully not reproducibility!), such as having everything run with one run_project command, in favor of a good written report — that's what matters most in the end. In this context, the main thing to keep in mind is that one or both of your markers will likely not be particularly quantitative, so you will need keep the explanations simple (but not patronizingly so!). In general, this advice holds while writing papers for more general (not narrow-subject focused) journals as well — keep it succinct and simple. Therefore, please also consider the report component mark separately from the computing component mark.

MARKING CRITERIA for EXAMS and ESSAYS and COURSEWORK

The following criteria are the basis on which the Department assesses both exam answers and coursework.

Literal Grade	Criteria (Problem type answers are marked on a semi-absolute scale)
A*	**Exceptional** Answer is an exceptionally well presented exposition of the subject, showing: (i) command of the relevant concepts and facts, (ii) a high critical or analytical ability**, (iii) originality, and (iv) evidence of substantial outside reading (where applicable). Numeric marks available 100, 95, 90, 85.
A	**Excellent** Answer is a very well presented exposition of the subject, showing many of the above features, but falling short in one or two of them. Numeric marks available 80, 76, 72.
B	**Very Good to Good** Answer (i) shows a clear grasp of the relevant concepts and facts, (ii) gives an accurate account of the relevant taught material *(as exemplified in the model answer),*and (iii) shows evidence of some outside reading *or* of critical or analytical ability**. Numeric marks available 68, 65, 62.
C	**Adequate** Answer: (i) shows a grasp of the basic concepts and facts, (ii) gives a mainly accurate account of at least half of the relevant taught material *(as exemplified in the model answer),*and (iii) does not go beyond that, *or* goes beyond that but is marred by significant errors. Numeric marks available 58, 55, 52.
F	**Unsatisfactory** Answer: 1.shows only a weak grasp of the basic concepts and facts, and is marred by major errors or brevity; numeric marks available 48, 45, 42; 2.shows a confused understanding of the question; is too inaccurate, too irrelevant, or too brief to indicate more than a vague understanding of the question; 35, 30, 25; 3.includes at most one to four sentences or facts that are correct and relevant to the question; numeric marks available 20, 15, 10, 5; 4.contains nothing correct that is relevant to the question; numeric mark 0.

** *Analytical* = assessing a hypothesis or statement by breaking it down into its elements and examining their inter-relationships and contribution to the whole; cf. *Critical* = judging a hypothesis or conclusion by examining the validity of the evidence adduced for it.

MSc & MRes PROJECT ASSESSMENT – THESIS (OR MID-PROJECT REPORT) MARKING CRITERIA

Literal Grade	% Grade	Criteria (Please give leeway if it is a mid-project report)
A*	100 95 90 85	**Exceptional.** Work is of a publishable standard**. It is an exceptionally well presented exposition of the project, showing: (*i*) command of the relevant concepts and facts, (*ii*) a high level of analysis, (*iii*) originality in thought and experimental or modelling design, and (*iv*) mastery of the relevant literature.
A	80 76 72	**Excellent.** Thesis is written to a publishable standard** with minor revision. It is a very well presented exposition of the project, showing most of the above features, but falling short in one of them.
B	68 65 62	**Very Good to Good.** Thesis contains potentially publishable material**, but needs revision of the text and further research. It is otherwise a well presented exposition of the project, showing: (*i*) a clear grasp of the relevant concepts and facts, (*ii*) appropriate, though not highly sophisticated analysis, and (*iii*) a sound knowledge of the relevant literature.
C	58 55 52	**Adequate.** Thesis is not written to a publishable standard and requires major revision and substantially more research. It is an adequately presented exposition of the project, showing: (*i*) a grasp of the basic concepts and facts, (*ii*) an adequate use of statistics in its analyses, and (*iii*) sufficient knowledge of the relevant literature to set its results in a scientific context.
D	48 45 42	**Unsatisfactory.** Thesis is an incomplete presentation of the project and is marred by major errors or gaps, missing analysis, lack of references, misconceptions, excessive brevity, etc, at most showing a weak grasp of the basic concepts and facts.
	35 30 25	Thesis as above, but presentation extremely poor and overall impression indicates a very weak grasp of the basic concepts and facts.
	20 15 10	Thesis as above, and in addition no real attempt to analyse data or present results in a scientific manner.
	5	Thesis as above but incomplete and lacking understanding in all areas.
	0	Thesis not produced.

****** This publishability implies that the data or theory is *per se* worth publishing.