Report in Graphical Models with R: guide lines

March 3, 2020

The final exam has the aim to check if the students have to understood the methods seen during the class and how/when apply them.
The student must analyze a real data-set or a simulated data-set from estimates on real data-set. (Subject to the Professor's approval)

1. Analyze a new data-set. Additional points will be awarded if you investigate if in the literature there are similar analysis concerning the selected variables and if the conclusions are compatible with the your analysis

2. Analyze a data-set described in another analysis. Additional points will be awarded if you investigate if in the literature there are similar analysis concerning the selected variables and if the conclusions are compatible with the your analysis

3. Reproduce the results of a paper. Additional points will be awarded if the paper covers a new part not explored during the class.

1   Data-set description

Where will be introduced the data-set (reference), the meaning of the variables and their nature.
Then, in compliance with the variables selected, the aim of the analysis must be described.
For instance:

- Study how one or more variables can be affected from the other variables

- Study the system of relationships among a set of variables

- Study if a set of variables affect another set of variables

- Check if a particular list of independencies (well known to be true) holds also in the dataset

- To replicate the results of any paper

- ...

2   Methodology

A brief explanation of the method(s) used: which model(s), which learning procedure... etc.

3   Result

In this part the results of the analysis must be shown and commented (plots, tables, scores,...). By taking into account the aim of the analysis the student must explain the estimated parameters and/or the probability distributions.

4   Appendix: code

Main R functions used.