Small Problem 7: Friends and Smokers

Query 1: For each of the unobserved nodes, the marginal posterior probability that that person is a smoker.

Metric 1: The sum, over all of the queried nodes, of the absolute difference between the computed and the true posterior probability

Ground Truth: The spreadsheet "problem-7-solution.xlsx" (without headers in the .csv version) contains the true posterior probability that a person is a smoker computed for each unobserved node (and for the given observed nodes).

TODO: Compute Metric 1 using the ground truth.

Submission:

The metric value should be computed for each elapsed time step (by calling the provided code or by implementing yourself). The metric value should be reported for several elapsed time steps. The number of elapsed time steps should be sufficient to establish an "informative profile".

For further details regarding submission of the metric and your code, please refer to the main CP4 problem description document, e.g. PPAML-Challenge-Problem-4.pdf.

Sample output files for this problem have been provided in the "sampleoutput" folder:

`problem-7-query-1-metric-1.csv`

Ground Truth Details:
Given the Markov Random Field (MRF) and the observation data, the marginal posterior probability that a person is a smoker (for each of the unobserved nodes) was computed using a Gibbs sampler.

A comparative version of the Gibbs sampler used for computation of the ground truth is included in the R-code that was part of the CP4 small problems tar file (problem-7-generator.R).