

# Bayesian Modelling B 3/4, assignment

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The assignment counts for 20% of your final mark in Bayesian Modelling B.

Consider the Pumps example at <http://www.openbugs.net/Examples/Pumps.html>. Fit this model in `rjags`, and produce estimates, with standard errors, for the expected value of the failure rates for each of the ten pumps. You should present your work as an R script-file `Pumps.R` such that the command

```
> source("Pumps.R")
```

executes correctly in R, and contains all of the necessary commands (including to produce graphics, where appropriate). Include the command `set.seed(101)` at the top of your script-file, so that your output is exactly the same as that of anyone else running the script-file.

The 20 marks are allocated roughly as follows:

1. Implementing the model, 5
2. Assessing convergence, 5
3. Estimating the failure rates, 5
4. Clarity of code (e.g., effective use of comments), 5.

Submit your `Pumps.R` file as an email attachment to me, [j.c.rougier@bristol.ac.uk](mailto:j.c.rougier@bristol.ac.uk), by 5pm on Mon 13 Mar. You should be aware of the Science Faculty policy on late submission: <https://www.bris.ac.uk/science/undergraduates/penalties.html>.