## HW1, Bayesian Modelling B 2016/7

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This is a sorting-things-out homework: nothing needs to be handed in. Go to the course webpage http://www.maths.bris.ac.uk/~mazjcr/BMB/2016/home.html for more details on the following steps.

- 1. Install the JAGS software on your computer.
- 2. Start R and install the rjags package.
- 3. Enter the following:

```
#### testing whether rjags is working correctly
```

```
library(rjags)
example(jags.samples)
```

You should see something similar to the following; output is shown after ##.

```
library(rjags)
## Linked to JAGS 4.0.1
## Loaded modules: basemod,bugs
example(jags.samples)
##
             data(LINE)
## jgs.sm>
##
## jgs.sm>
            LINE$recompile()
## Compiling model graph
##
      Resolving undeclared variables
##
      Allocating nodes
## Graph information:
##
      Observed stochastic nodes: 5
      Unobserved stochastic nodes: 3
##
      Total graph size: 40
##
##
## Initializing model
##
##
             LINE.samples <- jags.samples(LINE, c("alpha","beta","sigma"),</pre>
## jgs.sm>
```

```
n.iter=1000)
## jgs.sm+
##
             LINE.samples
## jgs.sm>
## $alpha
## mcarray:
## [1] 3.006265
##
## Marginalizing over: iteration(1000),chain(2)
##
## $beta
## mcarray:
## [1] 0.7949662
##
## Marginalizing over: iteration(1000),chain(2)
##
## $sigma
## mcarray:
## [1] 1.006746
##
## Marginalizing over: iteration(1000),chain(2)
```

Anything a bit like this is fine.

- 4. If you do not have a computer, or you are struggling to get your computer to work properly: repeat Q3 in the computer classroom G9 in the main Maths Building.
- 5. Download the rjags manual, and put it somewhere safe on your computer.
- Install the dplyr package in R on your computer. Bookmark https://cran.rstudio. com/web/packages/dplyr/vignettes/introduction.html.
- 7. Finally, have a look through the background handout at https://people.maths. bris.ac.uk/~mazjcr/BMB/2016/home.html#details, to make sure there is nothing in there which is too unfamiliar.

That's it!