

Assignment 7

Assumptions - Observed data is of 2 dimensions and theta is of 5 dimensions

Input -

Prior density function -

```
prior <- function(x)
{
  m<-c(1,1,1,1,1)
  c <-0.5*diag(5)
  pd<-dmvnorm(x,m,c,log = FALSE)
  return(pd)
}
```

```
calculate_mcmc(prior,mvrnorm(10,c(5,5),diag(2)),c(1,2,3,4,5))
```

Output -

final 5 theta points are

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[,1] [,2] [,3] [,4] [,5]

x 3.034093 3.043249 2.713565 1.674888 1.360623

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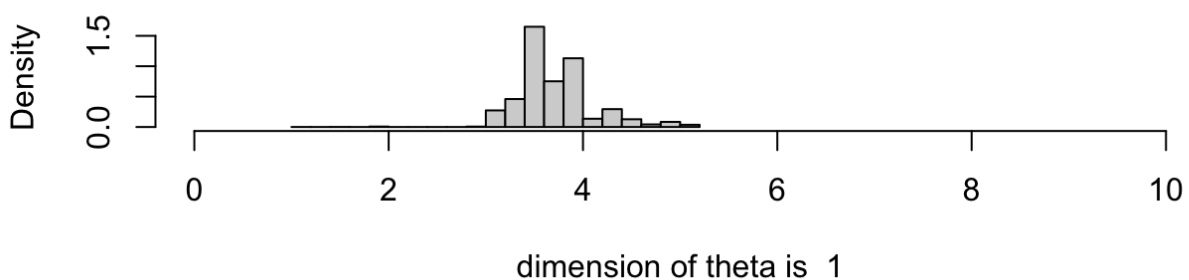
x 3.034093 3.043249 2.713565 1.674888 1.360623

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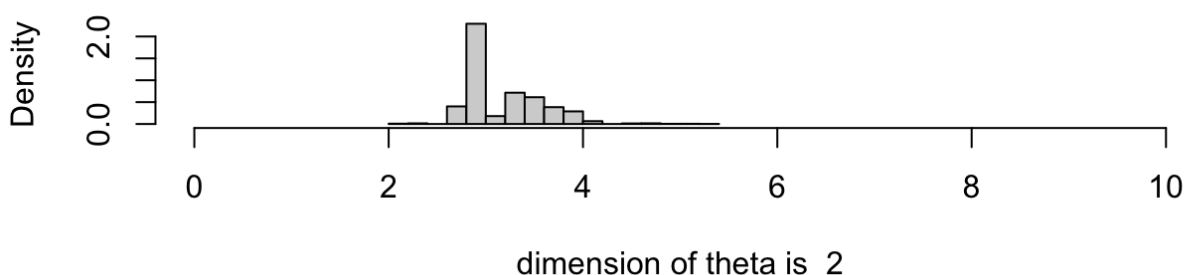
x 3.034093 3.043249 2.713565 1.674888 1.360623

Plots:

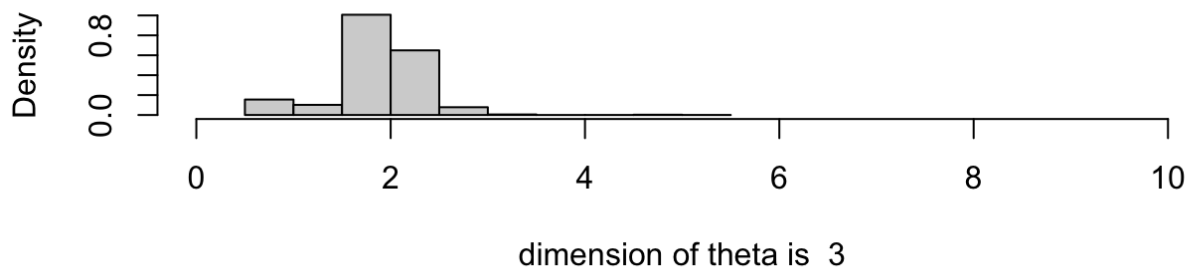
Histogram of values of theta visited by MCMC algorithm



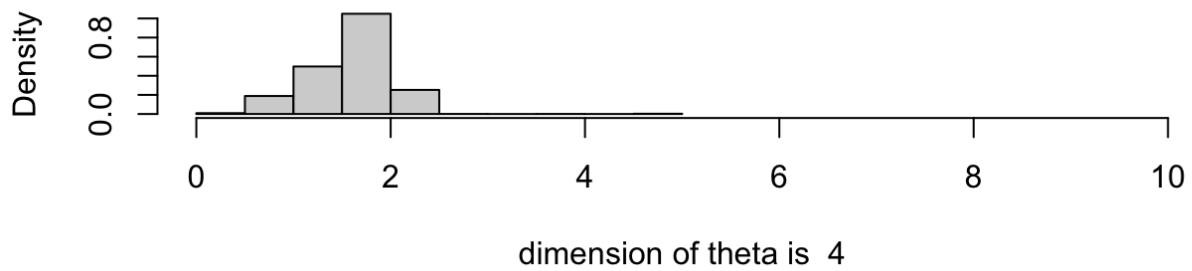
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