Gamma inference

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Sample

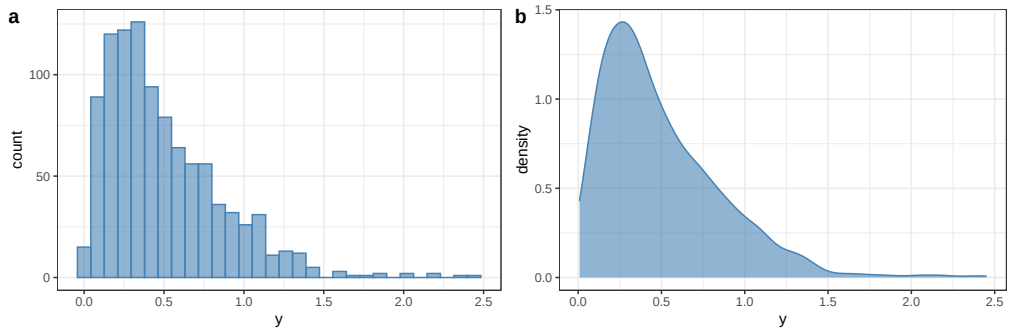


Figure 1: Histogram and density plot.

JAGS model

```
model{
  # Likelihood
  for (i in 1:n) {
    y[i] ~ dgamma(a, b)
  }

  # Transformation and interest values
  m <- a / b
  v <- a / b^2
  mo <- (a - 1) / b

  # Prior distributions
  a ~ dunif(0, 100)
  b ~ dunif(0, 100)
}
```

Sampling and results

Posterior distributions

`a`, `b`, `m`, `mo` and `v` are the α and β parameters, the mean, the mode and the variance respectively.

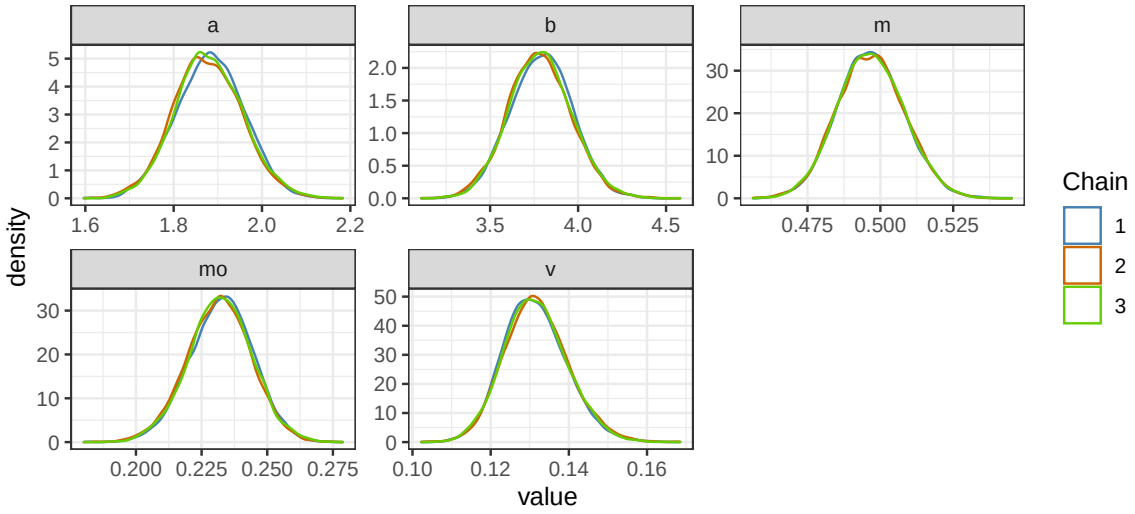


Figure 2: Posterior distributions densities for each parameter and in colors we show the chains.

Traceplots

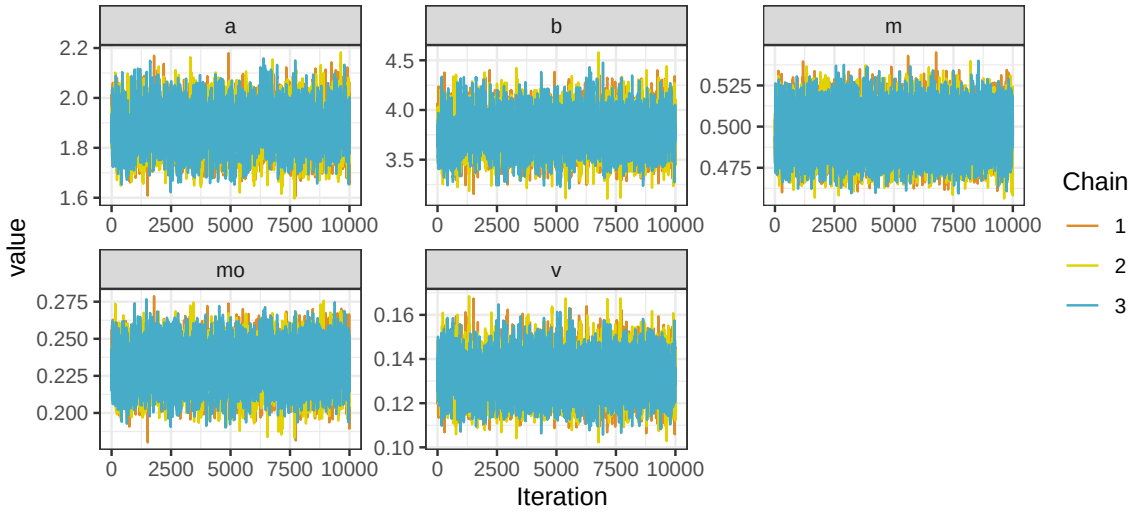


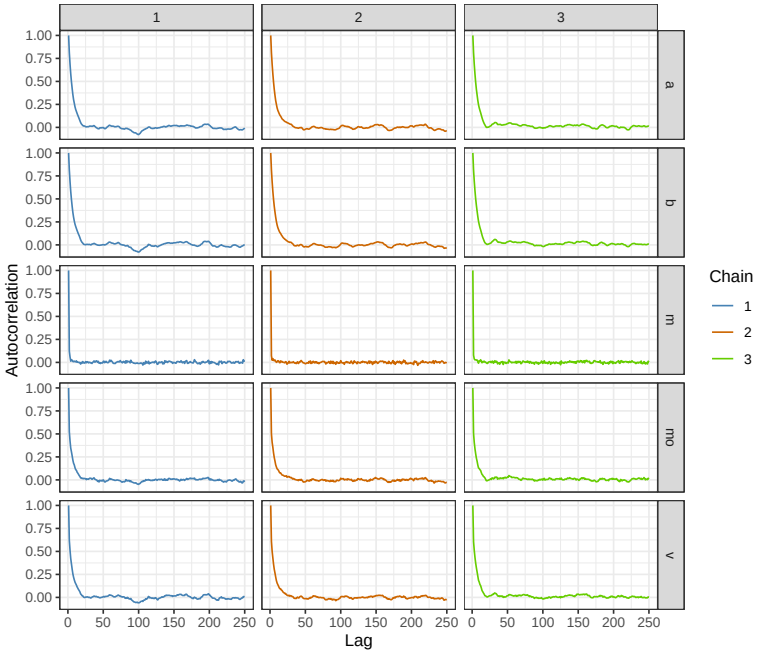
Figure 3: Traceplots for each parameter, in colors we show the chains.

Diagnostic statistics

Table 1: Summary statistics of the parameters posterior distributions.

	Mean	SD	R	Effective size
a	1.880	0.077	1.003	2634.686
b	3.786	0.178	1.003	2601.517
m	0.497	0.011	1.000	19639.365
mo	0.232	0.012	1.002	4319.093
v	0.132	0.008	1.002	3393.075

Autocorrelation



Estimates of the mean per iteration