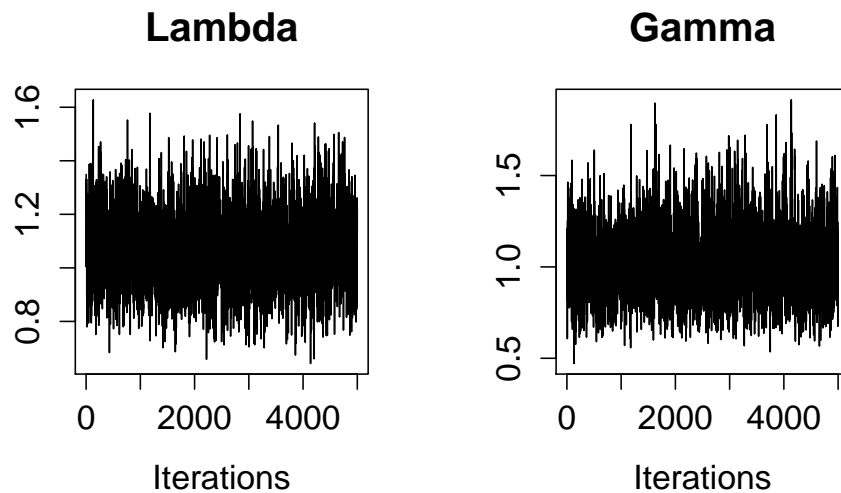


STA 360/601: Homework 5 Answers

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As described in the problem, we simulated data and generated samples from the full conditional distributions derived in the previous homework assignment. We generated 5,000 samples with after a 1,000 burn-in. Traceplots showed no evidence that the chains have not converged, and effective sample sizes were 1,758 for the parameter λ and 1,741 for the parameter γ . The chain appears to be mixing well, and the mixing does not seem to differ between the two parameters.



For $\log(\gamma)$, we observe an estimated posterior mean of -0.001 with a 95% central credible interval of $[-0.382, -0.363]$. The predictive distributions for $x_i = 0$ and $x_i = 1$ are plotted below, and are pretty similar.

