MCMC for LDA

$$p(\Phi, \Theta, Z|W) \sim \{Gibbs\ Sampling\}$$

$$\text{Init: } \Phi^0, \Theta^0, Z^0$$

$$\phi_i^1 \sim p(\phi_i|\phi_1^1, \ldots, \phi_{i-1}^1, \phi_{i+1}^0, \ldots, \Theta^0, Z^0, W)$$

$$\theta_i^1 \sim p(\theta_i|\Phi^1, \theta_1^1, \ldots, \theta_{i-1}^1, \theta_{i+1}^0, \ldots, Z^0, W)$$

$$z_i^1 \sim p(z_i|\Phi^1, \Theta^1, z_1^1, \ldots, z_{i-1}^1, z_{i+1}^0, \ldots, W)$$