

LDA Model

$$p(\textcolor{red}{W}, \textcolor{green}{Z}, \textcolor{blue}{\Theta}) = \prod_{d=1}^D \textcolor{blue}{p(\theta_d)} \prod_{n=1}^{N_d} \textcolor{green}{p(z_{dn}|\theta_d)} \textcolor{red}{p(w_{dn}|z_{dn})}$$

$$\textcolor{blue}{p(\theta_d)} \sim \text{Dir}(\alpha)$$

