



$$p \sim \text{Dir}_K(\alpha)$$

$$z_n \sim \text{Cat}_K(p)$$

$$x_n \sim \mathcal{N}_d(\mu_{z_n}, \sigma_{z_n})$$

$$\mu_k \sim \mathcal{N}_d(0, I)$$

$$\sigma_k \sim \text{InvGamma}(0, 1)$$