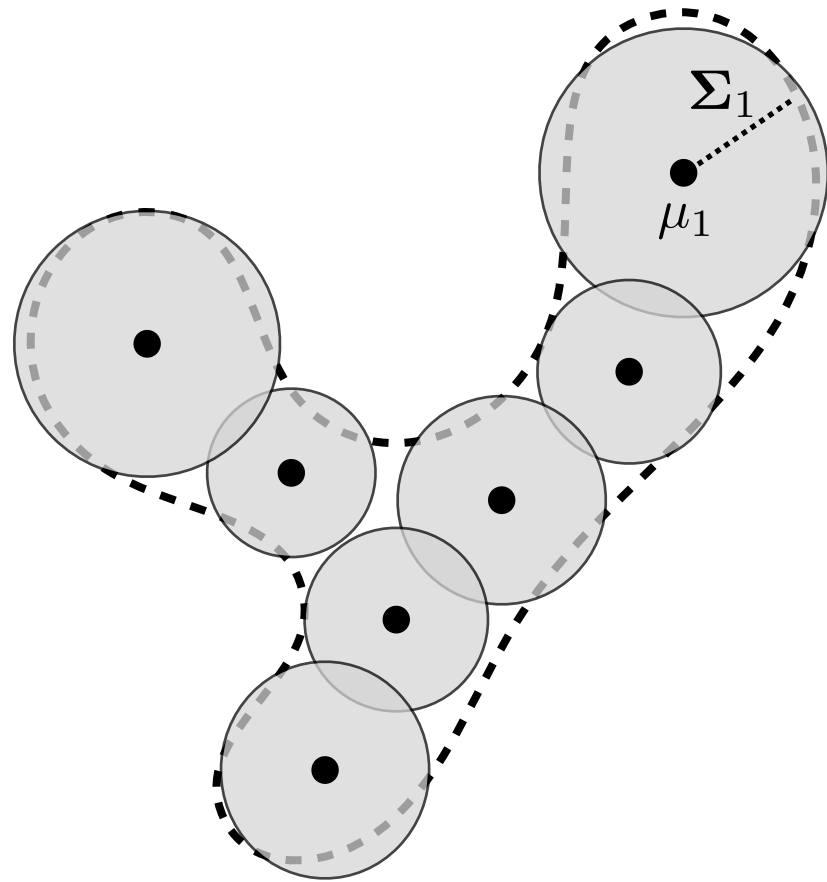


Finite mixture of Gaussians

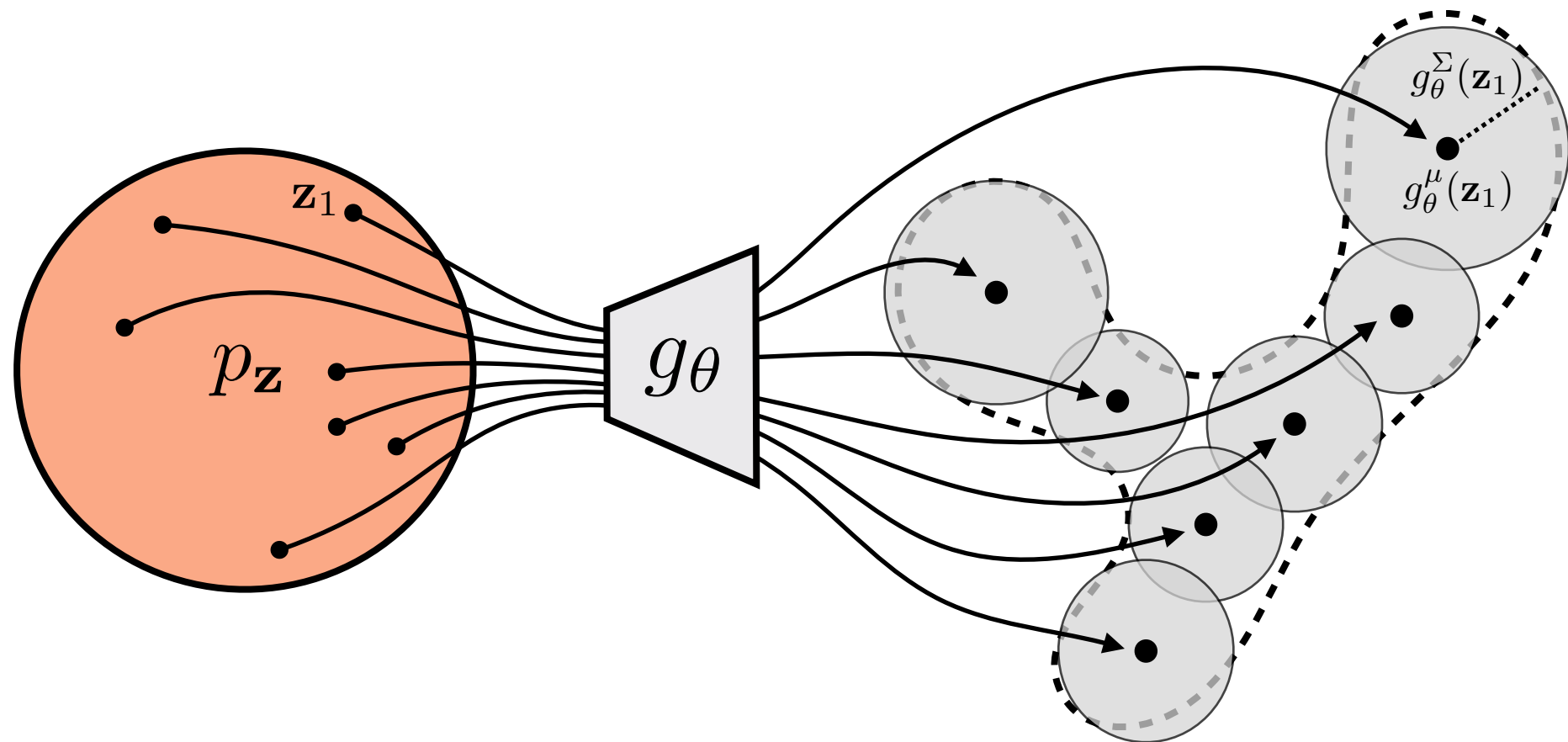
Parameters: $\{w_i, \mu_i, \Sigma_i\}_{i=1}^k$



$$p_{\theta}(\mathbf{x}) = \sum_{i=1}^k w_i \mathcal{N}(\mathbf{x}; \mu_i, \Sigma_i)$$

Infinite mixture of Gaussians (VAE)

Parameters: θ



$$p_{\theta}(\mathbf{x}) = \int_{\mathbf{z}} p_{\mathbf{z}}(\mathbf{z}) \mathcal{N}(\mathbf{x}; g_{\theta}^{\mu}(\mathbf{z}), g_{\theta}^{\Sigma}(\mathbf{z})) d\mathbf{z}$$