

maximize likelihood of original
input being reconstructed

$$\mathbb{E}_z [\log p_\theta(x | z)]$$

make approximate posterior
distribution close to prior

$$d_{\text{KL}}(q_\delta(z | x) \| p_\theta(z))$$

decoder
 $p_\theta(x | z)$

z

sample $z \sim \mathcal{N}(\mu_{z|x}, \Sigma_{z|x})$

$\mu_{z|x}$

$\Sigma_{z|x}$

encoder
 $q_\delta(z | x)$

input data

x

