KL-loss: $P(Z|Xi) \sim N(0,1) \Rightarrow N(u,\sigma) \sim N(0,1)$, for encoder

$N(u,\sigma)$

$P(X|Z)$

u1    σ1    z1    x1'

sampling

x1   encoder

$N(0,\sigma)$

u2    σ2    z2    x2'

x2   sampling   decoder

$N(0,\sigma)$

x3    u3    σ3    z3    x3'

sampling

reconstruction loss: MSE => for decoder