







Corrupted Encoder

Decoder

Clean Encoder

$$\begin{aligned}
 \boldsymbol{\mu}^{(l)} &= \text{batchmean}(\mathbf{z}_{pre}^{(l)}) \\
 \boldsymbol{\sigma}^{(l)} &= \text{batchstd}(\mathbf{z}_{pre}^{(l)}) \\
 \hat{z}_i^{(l)} &= g_i(\tilde{z}_i^{(l)}, u_i^{(l)}) = (\tilde{z}_i^{(l)} - \mu_i(u_i^{(l)})) \cdot v_i(u_i^{(l)}) + \mu_i(u_i^{(l)}) \\
 \mu_i(u_i^{(l)}) &= a_{1,i}^{(l)} \cdot \text{sigmoid}(a_{2,i}^{(l)} \cdot u_i^{(l)} + a_{3,i}^{(l)}) + a_{4,i}^{(l)} \cdot u_i^{(l)} + a_{5,i}^{(l)} \\
 v_i(u_i^{(l)}) &= a_{6,i}^{(l)} \cdot \text{sigmoid}(a_{7,i}^{(l)} \cdot u_i^{(l)} + a_{8,i}^{(l)}) + a_{9,i}^{(l)} \cdot u_i^{(l)} + a_{10,i}^{(l)} \\
 C_d &= \sum_{l=0}^L C_d^{(l)} = \sum_{l=0}^L \|\mathbf{z}^{(l)} - \hat{\mathbf{z}}_N^{(l)}\|^2
 \end{aligned}$$