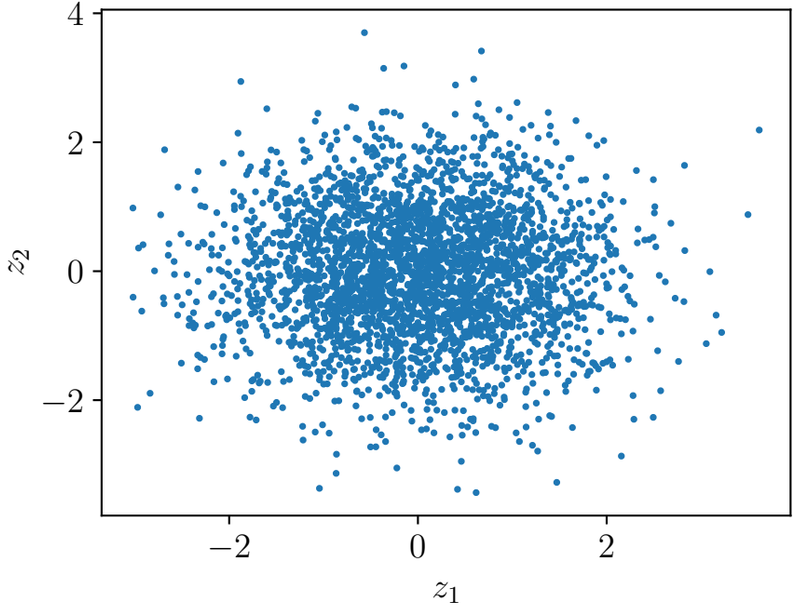
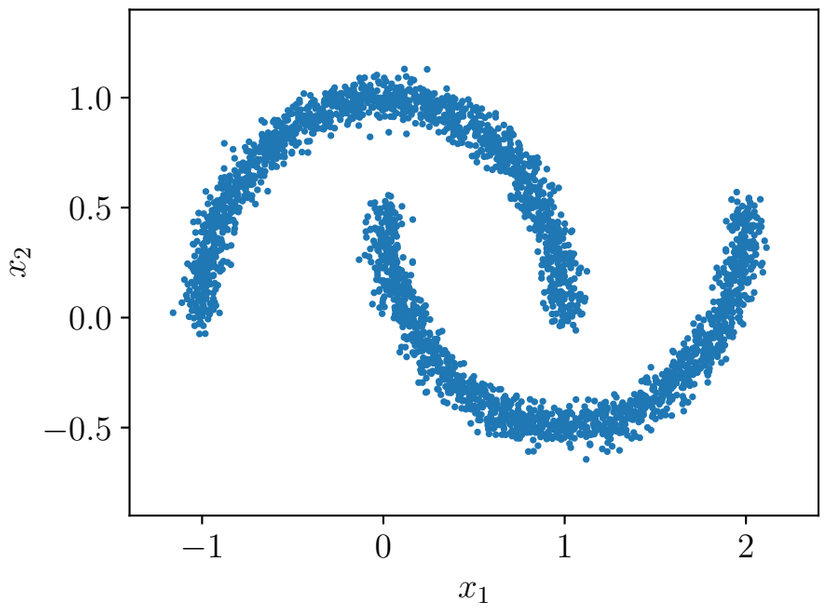
Base distribution, true target density and reconstructed target density

$p_{\boldsymbol{z}}(\boldsymbol{z}) \sim \boldsymbol{z} = (z_1, z_2)^\top$



$p_{\boldsymbol{x}}(\boldsymbol{x}) \sim \boldsymbol{x} = (x_1, x_2)^\top$



$p_{\boldsymbol{\phi}(\hat{\mathbf{x}})}(\boldsymbol{x}) \sim \boldsymbol{x} = \boldsymbol{f}^{-1}_{\boldsymbol{\phi}(\hat{\mathbf{x}})}(\boldsymbol{z})$