

# How to model $p(x)$

- $\log \hat{p}(x) = \text{CNN}(x)$

Infeasible

- Use the chain rule

$x_1$	$x_2$	$x_3$
$x_4$	$x_5$	$x_6$
$x_7$	$x_8$	$x_9$

$$\begin{aligned} p(x_1, \dots, x_d) \\ = p(x_1)p(x_2 \mid x_1) \dots p(x_d \mid x_1, \dots, x_{d-1}) \end{aligned}$$