## How to model p(x)

• 
$$\log \widehat{p}(x) = \text{CNN}(x)$$

Infeasible

Use the chain rule

Cool, but slow to generate

• 
$$p(x_1, \ldots, x_d) = p(x_1) \ldots p(x_d)$$
 Too restrictive

- Mixture of several Gaussians (GMM) Still too restrictive
- Mixture of infinitely many Gaussians