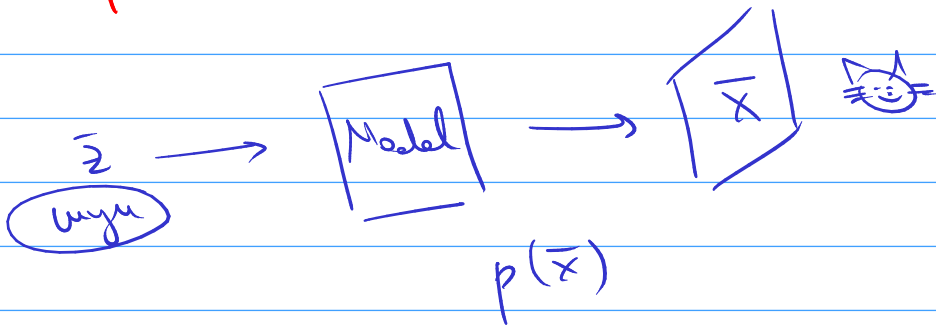


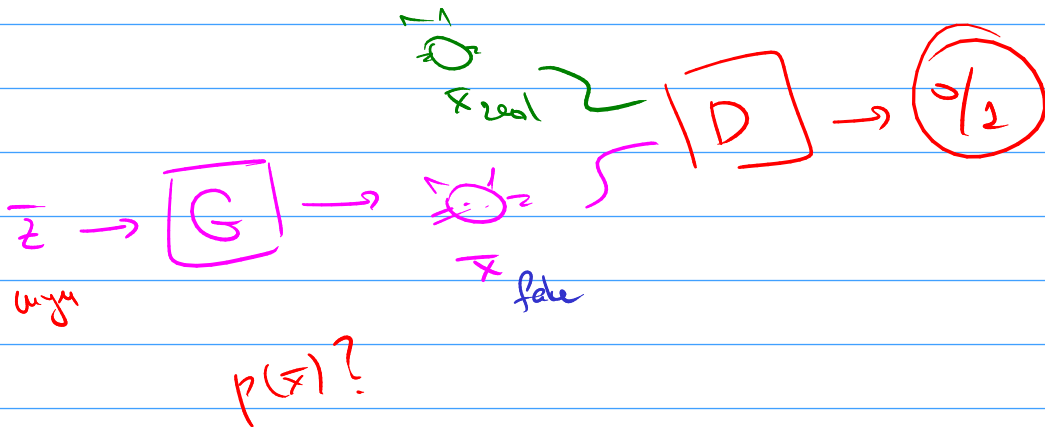
$$p(y|\bar{x})$$



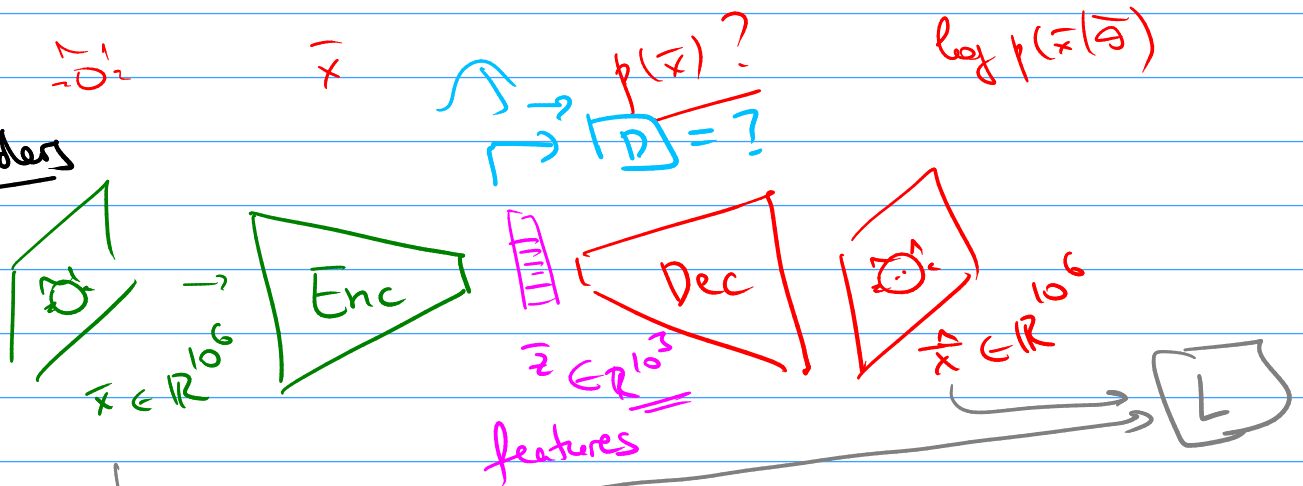
Naive Bayes

$$p(\bar{x}, y) = p(y) \prod_i p(x_i | y)$$

Arrows point from  $\bar{x}$  and  $y$  to the word "parameters" written below.



Autoencoders



$$\det \frac{d\bar{z}}{dz}$$

$$\begin{pmatrix} \frac{\partial z_1}{\partial x_1} & \frac{\partial z_1}{\partial x_2} \\ \frac{\partial z_n}{\partial x_1} & \frac{\partial z_n}{\partial x_2} \end{pmatrix}$$

$$\prod_{\bar{x} \in D} p(\bar{x} | \bar{\theta}) \rightarrow \max$$

$$\sum_{\bar{x} \in D} \log p(\bar{x} | \bar{\theta}) = \sum_{\bar{x} \in D} \left( \log \pi_0(\bar{z}_0) - \sum_k \left| \det \frac{d\bar{f}_k^{-1}}{d\bar{z}_k} \right| \right)$$