

## Neural network

Predictors



$x$

First hidden layer



$a_1$

Activation  
 $a_1 \leftarrow \Phi(a_1)$

$$a_1 = xW_0 + b_0$$

...

$k$ -th hidden layer



$a_k$

Activation  
 $a_k \leftarrow \Phi(a_k)$

$$\theta = a_k W_k + b_k$$



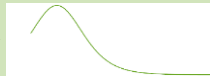
$\theta$

## Distributional Regression Network

$\mu$

$\sigma$

→ CRPS



## Bernstein Quantile Network

$\alpha_0$

$\vdots$

$\alpha_d$

→ Quantile Loss



## Histogram Estimation Network

$p_1$

$\vdots$

$p_N$

→ Categorical Cross Entropy

