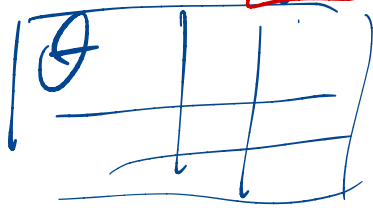


$$y = \theta^T x$$

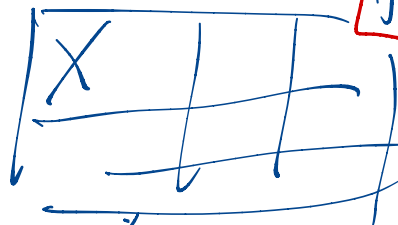
$$L = \sum_{i=1}^N (y_i - \theta^T x)^2$$

$$\boxed{\frac{\partial L}{\partial \theta}} = 2 (X\theta - y) I X$$

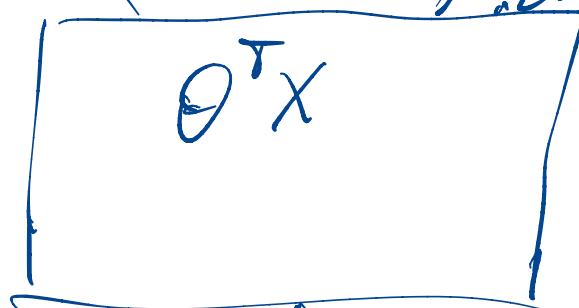
$$\Theta: \begin{matrix} 1 \times f \\ f \times 1 \end{matrix}$$



$$X: \begin{matrix} N \times f \\ f \times N \end{matrix}$$



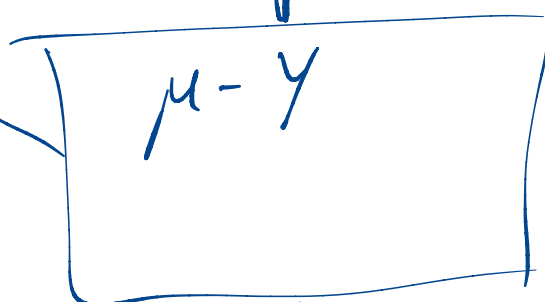
$$\mu: \begin{matrix} N \times 1 \\ 1 \times N \end{matrix}$$



"Linear"
 $= \mu$

$$y \sim \mathcal{N}(\mu, \sigma^2)$$

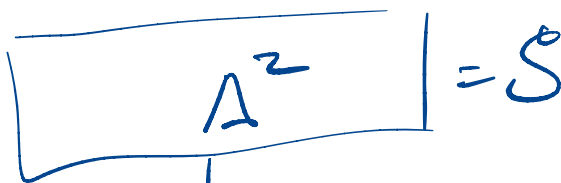
$$Y: N \times 1$$



$= \Delta$

"Residual"

$$\Delta: N \times 1$$



$= S$

$$S: N \times 1$$



$= \text{MSE}$

$$\mathcal{L}: \text{criterium}$$

\mathcal{L}

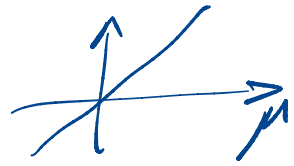
$$\theta^T x$$

$$\mu: 1 \times f \odot f \times N = 1 \times N$$

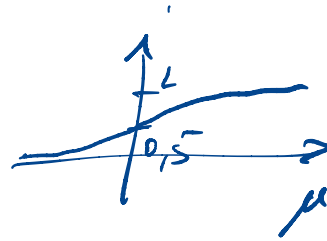
$$\mu: \underline{1 \times N} \quad \mu_c^2 \mu^T$$

$$\psi(\mu)$$

$$I(\mu) = \mu$$



$$\sigma(\mu) = \frac{1}{1 + e^{-\mu}}$$



$$\text{ReLU}(\mu) = \begin{cases} \mu, & \mu \geq 0 \\ 0, & \mu < 0 \end{cases}$$

