

JAX | Google

haiku
optax

Tensorflow

Keras

Google

Pytorch (Meta*/Facebook*)

$$f = ((a+c) \cdot (b-d))^2$$

$$e = \boxed{a+c} = 4$$

$$g = \boxed{b-d} = 2$$

$$h = \boxed{e \cdot g} = 8$$

$$f = \boxed{h^2} = 64$$

$$\frac{\partial f}{\partial c} = \cancel{\frac{\partial f}{\partial h} \frac{\partial h}{\partial e} \frac{\partial e}{\partial c}} + \cancel{\frac{\partial f}{\partial h} \frac{\partial h}{\partial g} \frac{\partial g}{\partial c}}$$

$$\frac{\partial f}{\partial h} = \frac{\partial h^2}{\partial h} = 2h$$

$$\frac{\partial e}{\partial c} = \frac{\partial(a+c)}{\partial c} = 1$$

$$\frac{\partial h}{\partial e} = \frac{\partial(eg)}{\partial e} = g$$

$$\frac{\partial f}{\partial c} = 2h \cdot g \cdot 1 = 32$$

① Due process of law
нужен прав баланса между
правом.

② Due process of law
нужно балансировать
пропреториальное право

③ Due process of law
баланс между правом
собственности (контролем)
пропреториального права баланса

$$\{ = [h \circ \varphi])$$

z

$$M \ni z$$

$$\frac{\partial f}{\partial a} = \frac{\partial f}{\partial h} \cdot \frac{\partial h}{\partial e} \cdot \frac{\partial e}{\partial a}$$

~~$\frac{\partial h}{\partial g}$~~ ~~$\frac{\partial e}{\partial c}$~~
 $(e \cdot g)$ $(a + e)$

$$\begin{bmatrix} X \\ \vdots \\ X \end{bmatrix} : N \times f$$

$$\begin{bmatrix} \Theta \\ \vdots \\ \Theta \end{bmatrix} : f \times g$$

$$\mu = \begin{bmatrix} X \\ \vdots \\ \Theta \end{bmatrix} : N \times g$$

$$\begin{bmatrix} Y \\ \vdots \\ Y \end{bmatrix} : N \times g$$

\dashv

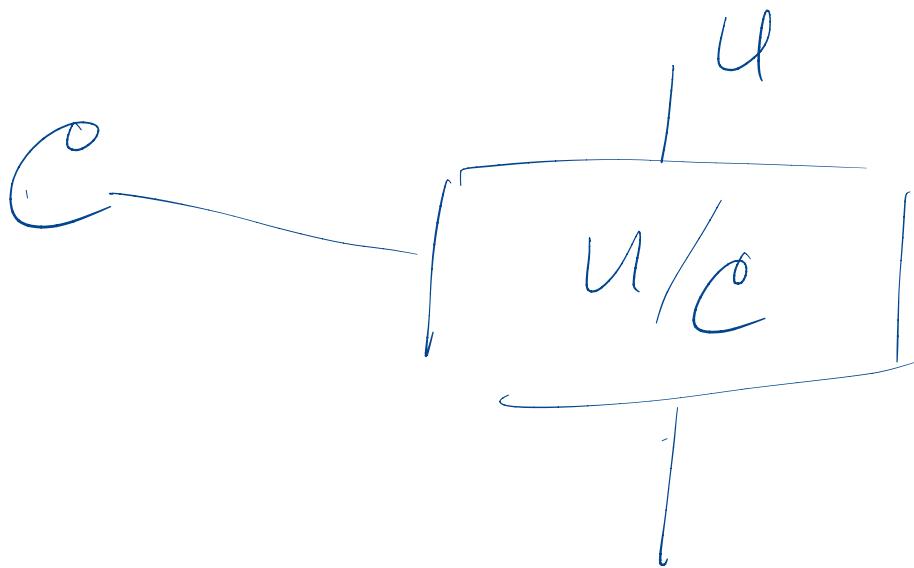
$$y - \mu : N \times g$$

$$S = \begin{bmatrix} d^2 \\ \vdots \\ d^2 \end{bmatrix} : N \times g$$

$$U = \underbrace{\sum S}_{I} : I$$

$$W \rightarrow \frac{Y}{W}$$

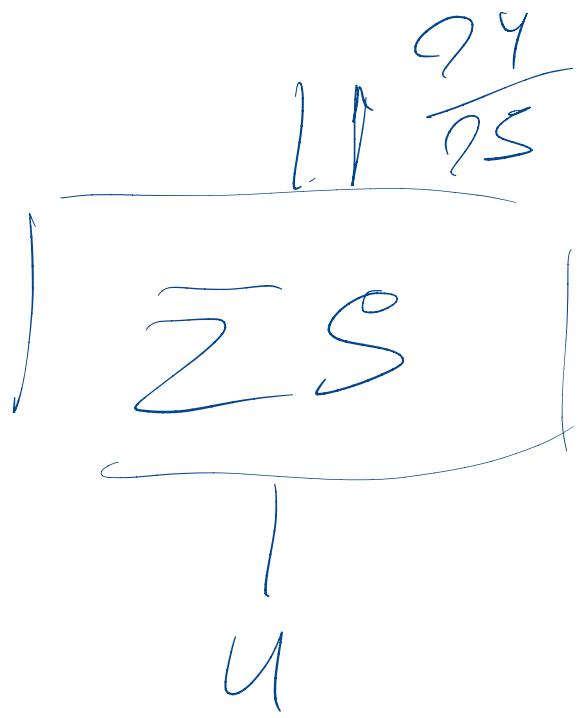
$$\frac{2L}{70} = \left(\frac{2L}{74}, \frac{2U}{75}, \frac{2S}{7d} \right) \frac{2d}{7\mu} \frac{2U}{70}$$



$$L = \frac{4}{c}$$

$$\frac{2L}{7C} = U$$

$$\frac{2L}{74} = e$$



$$\frac{\partial u}{\partial s} = \text{ones_like}(s)$$

$$\begin{bmatrix} X & H \end{bmatrix} : N \times f$$

$$\begin{bmatrix} \Theta & H \end{bmatrix} : f \times g$$

$$\mu = \begin{bmatrix} X & \Theta \end{bmatrix} : N \times g$$

$$\begin{bmatrix} Y & H \end{bmatrix} : N \times g$$

$$d \neq \begin{bmatrix} Y - \mu \end{bmatrix} : N \times g$$

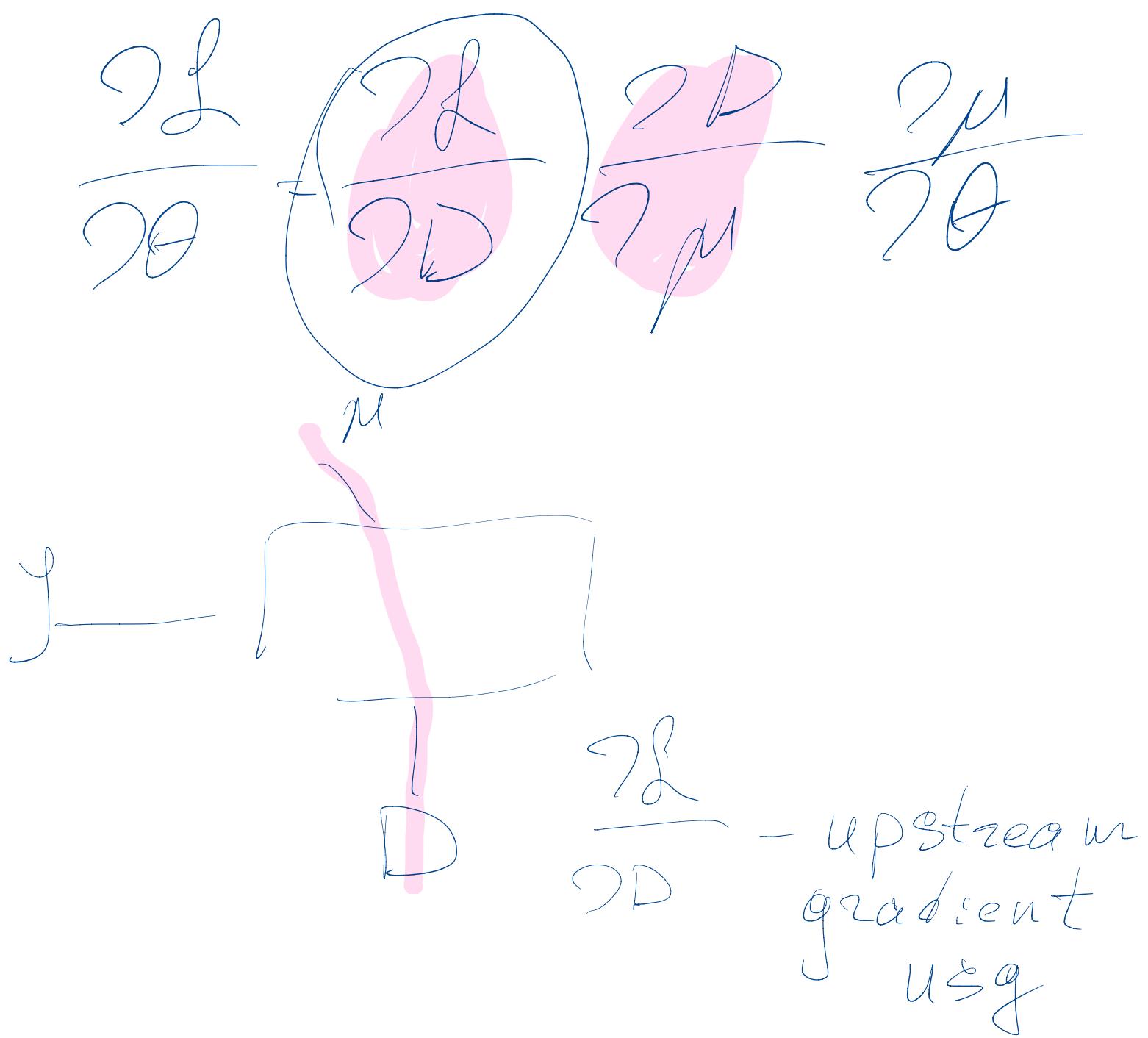
$$S = \begin{bmatrix} d^T \end{bmatrix} : N \times g$$

$$U = \frac{\sum S}{L} : 1$$

$$N$$

$$Y/N$$

L



$$\frac{\gamma_L}{\gamma_\mu} = usg \cdot \frac{\gamma_D}{\gamma_\mu}$$