

5. mmadd backward:

$$\text{backward}\left(\frac{dL}{dY}\right) \Rightarrow \frac{dL}{dK}, \frac{dL}{dX}, \frac{dL}{dB}, \frac{dL}{dR},$$

solve: (see 01025)

$$\frac{dL}{dK} = \alpha \frac{dL}{dY} X^T$$

$$\frac{dL}{dX} = \alpha K^T \frac{dL}{dY}$$

$$\frac{dL}{dB} = \beta \frac{dL}{dY}$$

1.

mmadd:

$$Y = f(K, X, B, \alpha=1, \beta=1)$$

$$= \alpha KX + \beta B$$

2. torch.addmm

$$Y = f(B, K, X, \beta=1, \alpha=1)$$

$$= \alpha KX + \beta B$$

3. code torch.addmm\_20170630:

$$Y = f(B, K, X, \alpha, \beta)$$

$$= \beta KX + \alpha B$$

4. code torch.addmm\_20170630:

$$Y = f(\alpha, B, \beta, K, X) = \beta KX + \alpha B$$