



$$\text{NTK} = \left[\sum_{l=0}^L \sum_{p=0}^{P^l} \frac{\partial f_\theta(x)}{\partial \theta_{l,p}} \frac{\partial f_\theta(x)}{\partial \theta_{l,p}} \right]_{1 \times 1} = \left[\frac{\partial f_\theta(x)}{\partial \theta_{0,0}} \frac{\partial f_\theta(x)}{\partial \theta_{0,0}} + \dots + \frac{\partial f_\theta(x)}{\partial \theta_{0,3}} \frac{\partial f_\theta(x)}{\partial \theta_{0,3}} + \frac{\partial f_\theta(x)}{\partial \theta_{1,0}} \frac{\partial f_\theta(x)}{\partial \theta_{1,0}} + \frac{\partial f_\theta(x)}{\partial \theta_{1,1}} \frac{\partial f_\theta(x)}{\partial \theta_{1,1}} \right]$$