

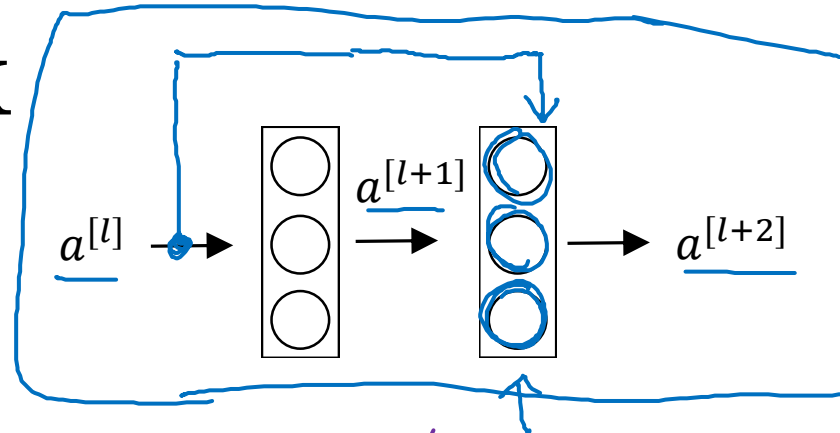


deeplearning.ai

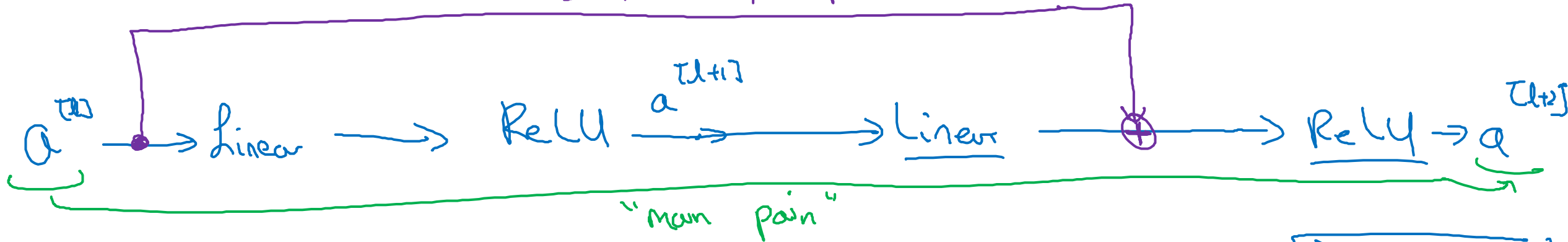
Case Studies

Residual Networks (ResNets)

Residual block



"short cut" / skip connection



$$\underline{z^{[l+1]}} = W^{[l+1]} \underline{a^{[l]}} + b^{[l+1]}$$

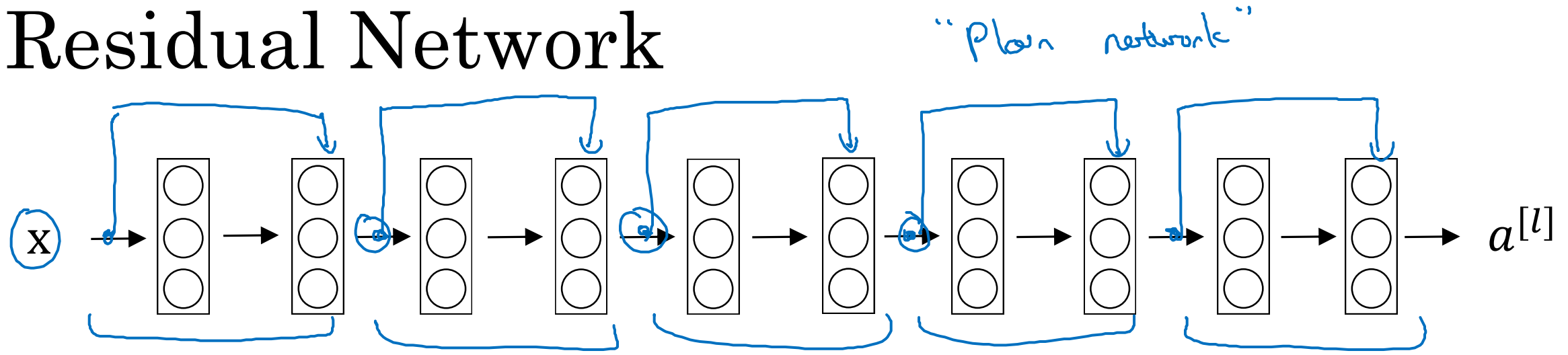
$$\underline{a^{[l+1]}} = g(\underline{z^{[l+1]}})$$

$$\underline{z^{[l+2]}} = W^{[l+2]} \underline{a^{[l+1]}} + b^{[l+2]}$$

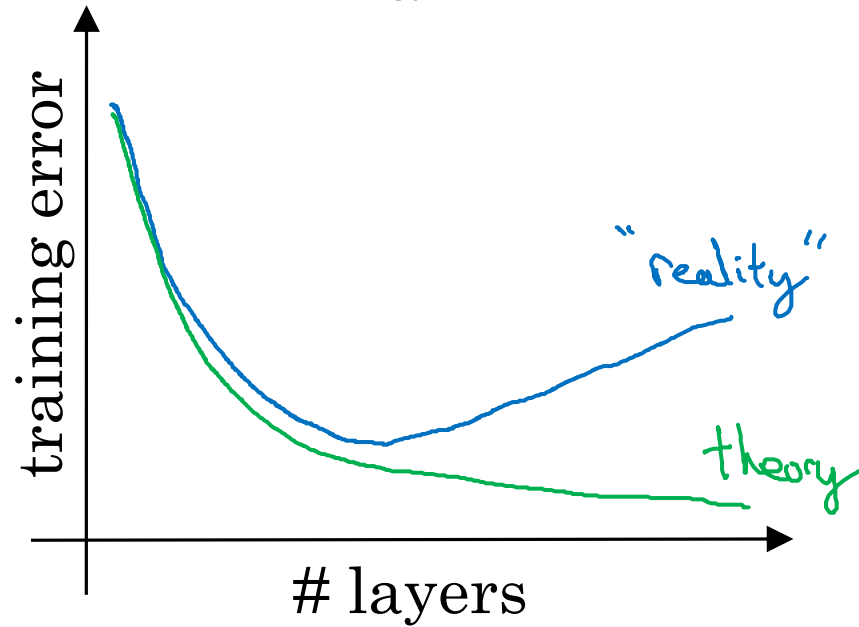
~~$$\underline{a^{[l+2]}} = g(\underline{z^{[l+2]}})$$~~

$$a^{[l+2]} = g(z^{[l+2]} + \underbrace{a^{[l]}})$$

Residual Network



Plain



ResNet

