

$$X \in \mathbb{R}^{N \times D}$$

$$Z = \sigma\left(\frac{1}{\sqrt{D}} X \Theta^T\right) \in \mathbb{R}^{N \times P}$$

$$y = a Z^T \in \mathbb{R}^N$$

$$a \in \mathbb{R}^P$$

$$\Theta \in \mathbb{R}^{P \times D}$$



