



Figure 1: Decoder.

$$\underline{G}^{[L]} = \underline{I}^{[L]} \quad (1a)$$

$$\underline{I}^{[L]} = \underline{Y}^{[D],[L]} \quad (1b)$$

$$Y^{[D],[L]} = \text{normalize}(F^{[D],[L]} + a^{[D],[L]}) \quad (1c)$$

$$F^{[D],[L]} = \text{feed_forward_nn}(j^{[D],[L]}) \quad (1d)$$

$$j^{[D],[L]} = \text{normalize}(o^{[L]} + a^{[D],[L]}) \quad (1e)$$

$$o^{[L]} = q^{[D],[L]}, k^{[D],[L]}, v^{[D],[L]} \quad (1f)$$

$$a^{[D],[L]} = \text{normalize}(O^{[L]} + p^{[L]}) \quad (1g)$$

$$v^{[D],[L]} = a^{[D],[L]} \quad (1h)$$

$$O^{[L]} = Q^{[D],[L]}, K^{[D],[L]}, V^{[D],[L]} \quad (1i)$$

$$Q^{[D],[L]} = p^{[L]} \quad (1j)$$

$$K^{[D],[L]} = p^{[L]} \quad (1k)$$

$$V^{[D],[L]} = p^{[L]} \quad (1l)$$

$$p^{[L]} = R^{[L]} \quad (1m)$$

$$R^{[L]} = \quad (1n)$$

$$q^{[D],[L]} = \quad (1o)$$

$$k^{[D],[L]} = \tag{1p}$$