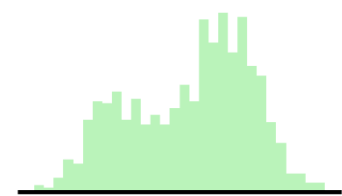


❄️ Frozen 🔥 Tuned

\mathbf{c} : context \mathbf{q} : query \mathbf{x} : model output \mathbf{x}^* : target output

θ_0 : initial params θ_s : optimized params

No Loss



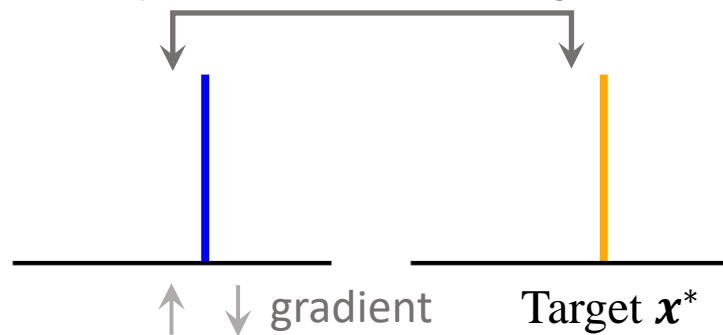
p_{θ_0}



$[\mathbf{c}, \mathbf{q}]$

(a) In-Context Learning

$$L_{ft} = D_{KL}(\delta_{\mathbf{x}^*}(\mathbf{x}) \mid p_{\theta_s}(\mathbf{x}))$$



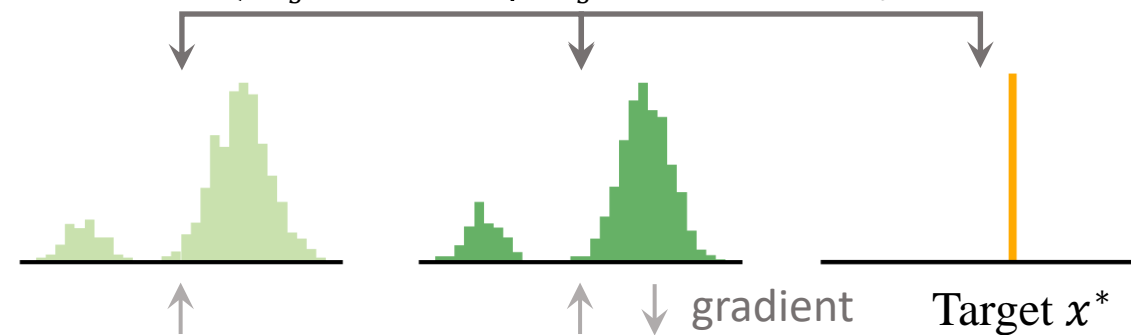
p_{θ_s}



\mathbf{q}

(b) Fine-Tuning

$$L_{ice} = D_{KL}(p_{\theta_s}(\mathbf{x} | [\mathbf{c}, \mathbf{q}]) \mid p_{\theta_s}(\mathbf{x} | \mathbf{q}))$$



p_{θ_s}



$[\mathbf{c}, \mathbf{q}]$



p_{θ_s}



\mathbf{q}

(c) Consistent In-Context Editing (ICE)