

# Project

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$$\nabla_{\theta} \eta_i(\pi_{\theta}) = E_{\tau} \left[ \sum_{t=0}^{T-1} \nabla_{\theta} \log \pi_i(a_{t,i}|s_t, \theta) A(s_t, a_{t,1}, \dots, a_{t,N}) + \beta \sum_{t=0}^{T-1} \nabla_{\theta} H(s_t|\theta) \right] \quad (1)$$

$$\hat{A}(s_t, a_{t,1}, \dots, a_{t,N}) = \sum_{l=0}^{\infty} (\gamma \lambda)^l \delta_{t+l} \quad (2)$$

$$\begin{aligned} \pi_i(a_{t,i}|s_t) &= \frac{1}{\sqrt{2\pi}\sigma_{1,i}} \exp\left(-\frac{(a_{t,i}^{(1)} - \mu_{\theta,i}(s_t)^{(1)})^2}{2\sigma_{1,i}^2}\right) \\ &\quad \cdot \frac{1}{\sqrt{2\pi}\sigma_{2,i}} \exp\left(-\frac{(a_{t,i}^{(2)} - \mu_{\theta,i}(s_t)^{(2)})^2}{2\sigma_{2,i}^2}\right) \end{aligned}$$