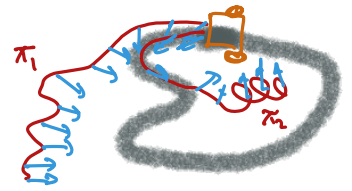


ACT I Imitation Learning AS Interactive Game

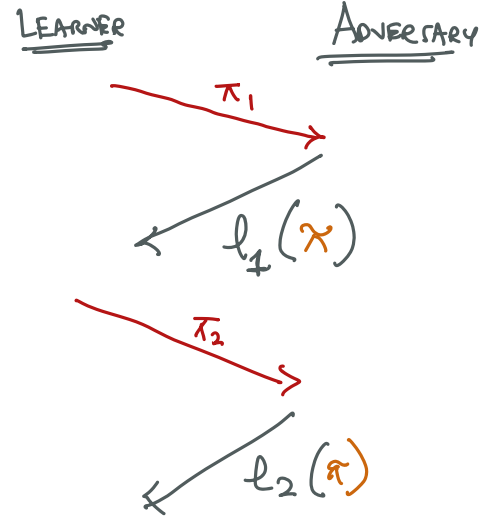
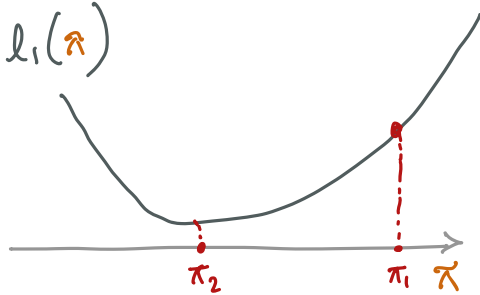
DATASET 1: ROLLING OUT POLICY π_1 AND QUERYING EXPERT

$$\{s_1, a_1^*, s_2, a_2^*, \dots\}$$



A DATASET DEFINES A LOSS FUNCTION

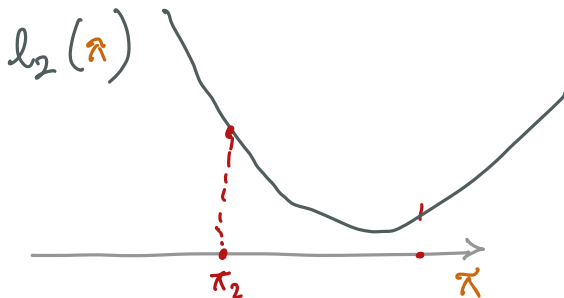
$$l_1(\pi) = \sum_{t=0}^{T-1} E_{s_t \sim d_t^{\pi_1}} (\pi(s_t) - a_t^*)^2$$



DATASET 2: ROLLOUT π_2 AND QUERY EXPERT

$$\{s_1, a_1^*, \dots\}$$

$$l_2(\pi) = \sum_{t=0}^{T-1} E_{s_t \sim d^{\pi_2}} (\pi(s_t) - a_t^*)^2$$



ACT II: WHAT IS THE BEST YOU CAN DO IN THIS GAME?

$$\boxed{\pi_i = \min_{\pi} l_i(\pi) \quad ?}$$