Title

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Outline

Introduction

- Overview of XXXX.
- Motivation for XXXXX.

Theorem Example

Theorem 2.1 (Foster, Kakade, Qian, Rakhlin '21)

Upper bound: There exists an algorithm ("Estimation-to-Decisions") that obtains

$$\mathbb{E}[\mathsf{Reg}(T)] \le \min_{\gamma>0} \left\{ \max_{M\in\mathcal{M}} \mathsf{dec}^0_\gamma(\mathcal{M}, \overline{M}) \cdot T + \gamma \cdot \mathsf{Esthel}(T) \right\}.$$

Lower bound: Any algorithm must have

$$\mathbb{E}[\mathsf{Reg}(T)] \ge \min_{\gamma>0} \left\{ \max_{M\in\mathcal{M}} \mathsf{dec}^0_\gamma(\mathcal{M}', \overline{M}) \cdot T + \gamma \right\},$$

where $\mathcal{M}'(\overline{M}) = \{M \subseteq \mathcal{M} \mid \|f^M - f^{\overline{M}}\|_\infty \le \frac{\gamma}{T}\}$.

Another Theorem with Proof

Theorem 2.2 (Example)

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Proof

Proof here.