Evaluation
Online learning
links with optimization and games
Université Paris–Saclay

regret minimization with global costs

Consider the problem of regret minimization with global costs described in the lecture notes and in [Kwo21, Section 4][1]. In the paper, the algorithms and guarantees are obtained by the conversion of a regret minimization algorithm into an approachability algorithm. The conversion scheme from the paper is less general than the scheme from the course, as the former is restricted to regularizers on convex compact sets.

Question. — Define and analyze algorithms using regularizers on the whole polar $\mathscr{C}^\circ$, and derive similar (or better ?!) guarantees. *Existing results from the paper can be used with a simple reference.*

References

[Kwo21] Joon Kwon. Refined approachability algorithms and application to regret minimization with global costs. *Journal of Machine Learning Research*, 22:200–1, 2021.

[1] The paper is available at https://arxiv.org/pdf/2009.03831.pdf