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Title: Efficient Equilibrium Algorithms for Compact Repeated Games

Abstract: Earlier work provided a polynomial-time algorithm for computing Nash equilibria for repeated normal-form games. The current work generalizes the previous threat-based algorithm to an algorithm schema for two-player repeated games. The algorithm schema is agnostic as to the representation of the individual stage games, requiring only that efficient algorithms exist for computing or approximating equilibria for zero-sum and identical interests games in this representation. We demonstrate the resulting algorithm for several types of stage games that would require exponential size to represent in normal form: extensive form games, extensive form games with information sets, alternating stochastic games, and more general stochastic games.