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TOURNAMENT-WINNING STRATEGY FOR ITERATED OPTIONAL PRISONER'S DILEMMA

by

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Iterated optional prisoner's dilemma (IOPD) is an adversarial game that can be used to model several real-world scenarios, from mutual grooming between primates to alliances between business firms. This study utilizes simulation techniques to determine winning strategies for IOPD tournaments in a variety of initial conditions. Machine learning techniques are used to iteratively improve upon the winning strategy, culminating in a single undefeated strategy. The outcome of this study is a single strategy that we claim is likely to win an IOPD tournament for most reasonable initial conditions.

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