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**Machine Learning Checkers Game Artificial Intelligence**

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Positive reinforcement is a technique used to train pets and children. However, it is possible to use similar techniques to teach a computer various things with “reinforcement learning”. A machine learning algorithm is given theoretical “treats”, to indicate what choices are optimal. This method of teaching machines is popular in the field of robotics, as well as others such as finance and even operation of traffic lights. This report uses a brute force method of “reinforcement leaning” to teach an artificial intelligence checkers. The AI pools together all possible choices in the game and tries each one, reviewing which choice gives the most theoretical “treats”. After many runs, the AI compiles a data set of the most optimal choices and learns the best way to play the game.

Key words: reinforcement learning, theoretical treats, artificial intelligence, brute force, optimal choice, choice pool.