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AlphaGo Research Review

It paper's goals was to show how DeepMind defeated the best AlphaGo player introducing a new technique approach, minimizing the enormous search space of Go created by traditional AI methods, which create a search tree for each possible position. Using Deep Learning principles, the DeepMind implemented two deep convolution neural networks (CONVNET). One CONVNET, called "value network", predicts how likely a move can lead to win after optimal moves. The other, called "policy network", helps to reduce the breadth of the searching move to play & using Monte Carlo Tree Search (MCTS), that effectively selects actions by look-ahead search it could "prune" even more the search tree.

This paper introduced many AI training perspectives: 1. Supervised Learning using human skills to train the CONVNET; 1. Reinforcement Learning, the system played against different versions of itself, learning from its mistakes; 1. Finally the evaluation function was created using Reinforcement Learning using self-play data set.

As result, it program defeated 99.8% of others Go programs and even defeated the human European Go champion.