Research review on Deepmind’s AlphaGo
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AlphaGo developed by Google’s deepmind is first computer game Go player to beat a human professional. Go is considered to be one of the most difficult games for computers to win, because it has much larger branching factor making it prohibitively difficult to use traditional AI methods like alpha beta pruning tree traversal and heuristic search.

AlphaGo uses algorithm which has combination of machine learning and tree search techniques, combined with extensive training from human and computer play. It uses Monte Carlo tree search guided by a value and policy network, both implemented deep learning.

The system's neural networks were initially bootstrapped from human gameplay expertise. AlphaGo was initially trained to mimic human play by attempting to match the moves of expert players from recorded historical games, using a database of around 30 million moves. Once it had reached a certain degree of proficiency, it was trained further by being set to play large numbers of games against other instances of itself, using reinforcement learning to improve its play.AlphaGo achieved 99.8% winning rate against several other Go programs and also defeated human European champion by 5 games to 0.