AlphaGo

AlphaGo is the name of an AI computer program developed by Alphabet Inc’s Google DeepMind in London. As its name suggests, it plays the Chinese board game “Go”. Go originated in China over 3000 years ago. The rules are fairly simple, players take turns placing black and white stones trying to capture territory, however Go is considered to be a much more difficult game for a computer to play than other games such as chess, because of its high branching factor. There are approximately 10 to the power of 170 board configurations, making it a googol times more complex than Chess. Many traditional approaches to these games would never work as there are simply to many possible cases to be explored. Over the past few years however, AlphaGo has been able to learn the game to the point where it has beaten some of the best Go players in the world.

Before AlphaGo, no computer had been able to defeat a ranked Go player without a handicap. In 2012, a software program called Zen beat a 9-Dan (the highest rank achievable for Go players) player named Masaki Takemiya two times at five and four stones handicap. AlphaGo is a deep learning project inspired by previous Go AI attempts. It began in 2014 and by October 2015 it had defeated every other Go AI and became the first Go AI to beat a ranked human player. Over the years it continued to take games from professional Go players, and in 2017 it beat the number one ranked Go player in the world and was rewarded an honorary 9-Dan. So far, no other Go AI has come close to achieving the levels of Go play which AlphaGo has. However, AlphaGo is officially retired from entering any competitive play. In the near future data from AlphaGo’s playtime will be released for Go players to study.