**AlphaGo**

***What is GO?***

**It is an abstract board game for two players in which the aim is to surround more territory than opponent.**

***What is AlphaGo?***

**It is the first computer program to defeat a professional and a world human champion player. It is the strongest GO player in world history.**

***How it works?***

* **It uses combination of advanced search tree with deep neural networks.**

**This neural network uses the description of GO board as an input and process it through numerous layers to produce an output.**

* **One neural network - policy network 🡪 selects the next move to play.**

**Other neural network – value network 🡪 predicts the winner of the game.**

* **The creators of AlphaGo made the computer play various amateur games, making it learn from its mistakes and an understanding of human play.**
* **Overtime, it improved, became better at learning, at decision-making and became increasingly stronger.**

**This process is known as reinforcement learning.**

**“I thought AlphaGo was based on probability calculation and that it was merely a machine. But when I saw this move, I changed my mind. Surely, AlphaGo is creative.”**

***Lee Sedol***

***Winner of 18 world GO titles***

***Source:*** [***https://www.deepmind.com/research/highlighted-research/alphago***](https://www.deepmind.com/research/highlighted-research/alphago)

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