

Reinforcement Learning

Reinforcement learning is a practice in machine learning. It's all about taking the right steps to maximize your reward in a given situation. It is used by a variety of software and computers to determine the best feasible action or path in a given situation. Reinforcement learning differs from supervised learning in that supervised learning includes the solution key, allowing the model to be trained with the right answer, whereas reinforcement learning does not. Instead, the reinforcement agent selects what to do to complete the job. It is to learn from its experience in the absence of a training dataset.

Positive vs Negative

There are two types of reinforcement learning;

- **Positive Reinforcement**

When an event occurs as a result of a particular behavior, reinforcement increases the strength and frequency of the behavior. In other words, it influences conduct positively.

Positive reinforcement learning has the following advantages:

- It sustains change and maximizes performance
- Too much reinforcement might lead to an overflow of states, lowering the effectiveness

- **Negative Reinforcement**

Negative Reinforcement is defined as behavior strengthening as a result of a negative condition being avoided or halted.

Negative reinforcement learning has the following advantages:

- Increases behaviour
- Minimum performance

Key applications reinforcement

Reinforcement learning has its best application in situations where the only way of getting data is interacting with a certain source of data. It can also be used in the automation of industrial machines and just for general data processing.