Machine learning

What does it do?

In this day and age, machine learning is everywhere. It is used by major companies like Youtube and Facebook to collect data from us users to increase our activity on their sites as well as choose what kind of ads to play for us, it also sets prices for certain items on websites like Ebay and tracks if you purchased the item at said price, in the stock market different machines are buying and selling shares against other different machines.

Machine learning can be found everywhere in our daily lives whether we know it or not, collecting data from us, which websites we visit, how long we visit them, what purchases we make online, which videos we watch on Youtube, where we have been when we turn on our location, and so much more. In this age of technology, our data is the greatest asset for companies like Facebook and Google. All this data collected combined with machine learning allows the machine to correctly show the right ads can be played to the right person on Facebook, the right videos can be suggested to you on Youtube, the right tweets are shown to you on Twitter, and the right pictures shown to you on Instagram. And for each time the machine learning algorithm gets it wrong, it makes corrections it self and with constant try and error the machine is able to learn your patterns, your interest, and the right price to set for the next thing you buy online.

More and more companies are noticing how important machine learning is. Companies like Open AI who have even developed an AI for the game Dota 2 which can rival competitive players of the game in a 1 versus 1 format. With machine learning being able to learn what humans take years of practice to learn and master, machine learning may be used in other aspects such as conducting surgeries or driving cars. In years to come, we may see machine learning in many advanced fields working more efficiently than their human counterparts.

Machine learning in a simplified matter involves two parts, the builder machine and the teacher machines. The builder machine makes machines that could potentially solve the problem and the teacher machine tests the machines made by the builder machine. The highest scoring machine is kept whilst the rest discarded. More copies of the best scoring machine are made with small adjustments tested again and the cycle repeats a few million times until you have a machine that is "self-thought" how to solve the specified problem. For these tests to be run, a lot of data is needed. The internet has made it possible for companies to collect such data from millions of users world-wide. Without the internet, such data simply is unavailable and would take too long to collect. Another important technology that allows for this to work would be how fast computers are now today. The advancement of PC allows for thousands of these machines to run at the same time allowing for much faster learning. If a slower PC was used, test would be horribly slow and take forever to learn.

What is the likely impact?

The likely change that the development of machine learning might bring are countless. The noticeable ones are the better understanding of data collected from physicians gathered from medical patients. Data in different forms may be taken such as images, or lab tests, or doctors notes. Machine learning will be able to process all this data to come up with correlations that we have never noticed before in a much faster, more accurate and more accessible manner. With machines learning your daily patterns and habits, tailored experiences such as meals or clothing may be made to your taste.

Everyone who opts for their data to be collected will be affected by the coming of machine learning. It will be prevalent in everything from your recent purchases to recent occasions to tailor advertisements specifically for you. Everybody's lives will be more transparent, and it will be much harder to maintain a private lifestyle.

Many jobs could be potentially being replaced such as those who deal with statistics as machines will be able to learn how to study such data and be able to do it in a more efficient data compared to their human counter parts. Stock brokers will be replaced with AI to buy and sell shares that would maximize profits. To a more extreme extent, service staff may be replaced with advanced AI to be a more efficient server. It is hard to say what the future of machine learning would be, it depends on how intelligent such machines can become.

How will this affect you?

My daily life would be changed dramatically. Nearly all my actions would be watched by these machines to collect my data. These machines would then predict what ads would be played to me, what deals that would catch my eye. My whole online shopping experience would be tailored based on my daily actions. This might mean I would end up purchasing more items as more things that would interest me are shown to me. It also makes me feel very exposed in a way where everything I have done would be accessible for these machines to dissect and turn into a profit for these cooperation's that run the machines.

The same would apply for my family members. My grandparents would most likely be paranoid about their data being collected and used for this purpose, or they might not even realize that their data is collected at all. Our data and privacy are precious to us, would we rather live a more convenient life in expense of our lack of privacy? In a world where machines may learn more about us then we may learn about ourselves, that is a difficult question to answer.