Artificial Intelligence:

Scientific study of algorithms and statistical models that computer systems use to effectively perform a specific task without using explicit instructions relying on patterns.

Machine Learning algorithms build a mathematical model based on sample data known as training data in order to make predictions or decisions.

Artificial Intelligence has two seperate ideas.

ANI- Artificial Narrow Intelligence

Eg: smart speaker, self driving cars. These are one trick problems where if we find the appropriate trick then this can be incredibly valued.

We have tons of progress in this area.

AGI - Artificial General Intelligence

Eg: Can do anything human can do and even more.

We have almost no progress in this area.

Most used learning in AI is supervised learning. In this learning,

Input A gives B output also called as A->B mapping.

Eg: email spam, speech recognition.

Why supervised learning?

If we use traditional AI then the performance stops getting better after few inputs and gives the same output for all the inputs.

In order to improve the performance, neural networks is used.

Neural networks play key role in improving the machine learning performance.Large amounts of data and large neural network gives high performance.

We can acquire data by manual, from observing behaviours , download from websites.

If we have bad data, AI will learn inaccurate things leading to bad model.

ML Vs Data Science

In ML we train the machine or model using the data called training set and it maps an output with respect to input. In data science, we analyse the data and draw conclusions.

What makes an AI company?

* Execute pilot projects to gain momentum.

Few small projects to get some better sense of ehai AI can do or cannot.

* Build an inhouse AI team
* Provide broad AI training.

Not only just to engineers but also to managers, executives.

* Develop an AI strategy and external strategies.

What ML can do or cannot do?

ML works well when

* Learning a simple concept

<= second of thought

* Lots of data

What ML cannot do?

ML works poorly when.

* Learning complex concepts from small amounts of data.
* It is asked to perform on new types of data, i.e; different than the data it has seen in your data set.