

What is AI, ML, DL, and Data Science

- **Artificial Intelligence (AI)**: It is something that enables the machine to think without human intervention.
Example: Google Maps, Self Driving car etc.
- **Machine Learning (ML)**: It is a subset of AI and provides us with some statistical tools to explore and understand about the particular data.
Example: Email spam filter, grouping similar products, Training a robot etc.

Three different approaches are possible:

- i. Supervised Machine Learning (Past labelled data will be available and we will know the output.)
 - ii. Unsupervised Machine Learning (Past labelled data is not available and we will not be able to know the output. We also use it to solve clustering techniques.)
 - iii. Reinforcement/Semi-Supervised Machine Learning (Some of the past labelled data is available while some of it is not)
- **Deep Learning (DL)**: It was created as a method of making machines think like humans using multineural network architecture. Main idea behind this is to mimic human brain. It is a subset of ML.
Example: Face recognition, Stock market trend prediction etc.
It includes:
 - i. Artificial Neural Network (ANN) – Problems involving numbers
 - ii. Convolution Neural Network (CNN): Problems involving images
 - iii. Recurring Neural Network (RNN): Time series kind of data problems.

- **Data Science (DS)**: Technique that applies all these techniques and tools like statistics, probability, linear algebra etc to create a completed AI.