Input layer

Hidden layer 1

Hidden layer 2

Output layer

Loss

Why Deep Learning??

Machine Learning

Input → Feature extraction → Classification → Output

Car
Not Car
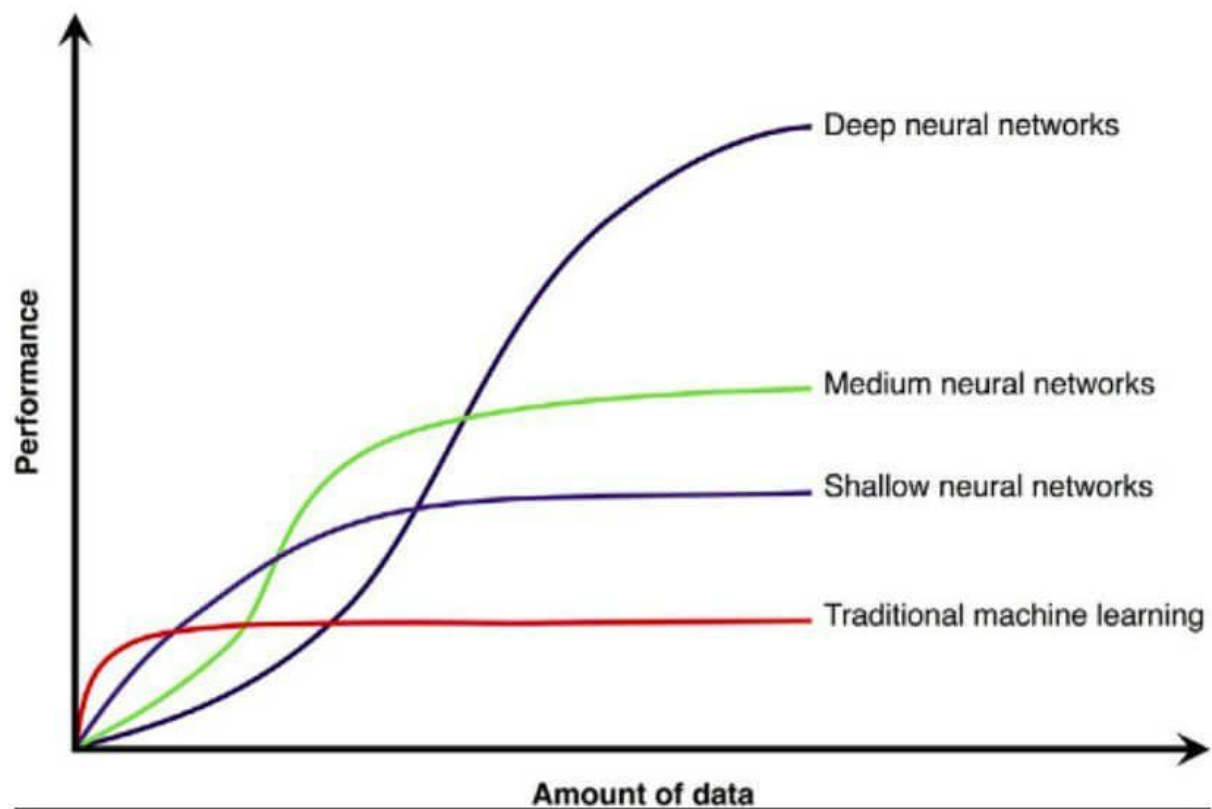

Deep Learning

Input → Feature extraction + Classification → Output

Car
Not Car
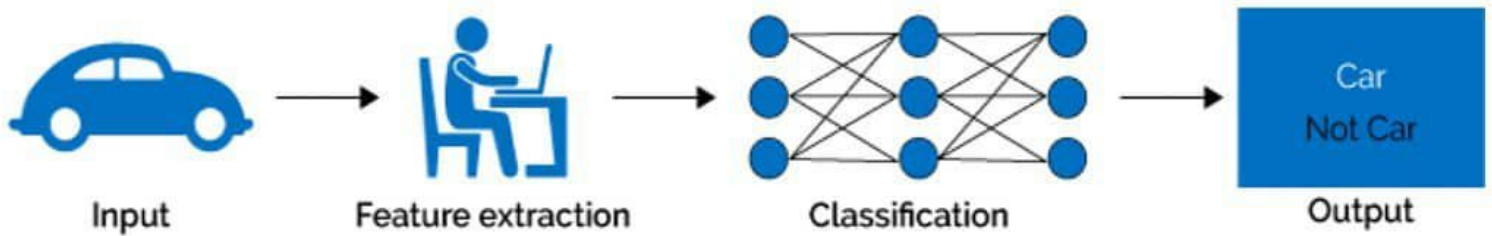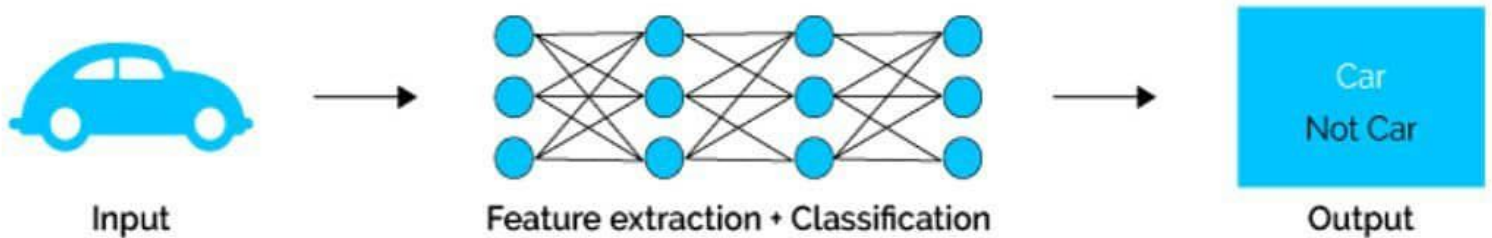
- If you see the difference between Machine learning and Deep learning is Automatic feature extraction.
- In Machine learning we need to handcraft the features before building the model.
- But in Deep learning you don't need to do that, model takes care of that with the help of nodes and weights. will explain more about this in upcoming posts

A chart plotting Performance (y-axis) against Amount of data (x-axis), showing curves for Deep neural networks, Medium neural networks, Shallow neural networks, and Traditional machine learning.

- **These days deep learning becoming the most important in every application, main reason behind that is data.**
- **Lot of data is being generated every second and its difficult for machine learning algorithms to handle that as even you give more data the performance will not improve after a saturation point.**
- **Deep learning algorithms overcomes this problem.**

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- **Using deep learning enables us to turn huge amounts of data into insights, and increase intelligence in technology.**
- **These insights have been used for major breakthroughs in science, medicine, agriculture, and many other areas.**
- **In combination with other novel technologies as IoT or robotics, deep learning can help tackle some of the biggest problems of our world, and improve people's lives.**