



DEMYSTIFY AI: **Deep Learning**

TAKEAWAYS

What is Deep Learning?

- 1** ML is a subset of AI.
- 2** Deep Learning is a subset of ML which came as an advancement to regular ML which is otherwise known as statistical ML.
- 3** Deep Learning is used when the pattern recognition is complex and when the data volume is huge.

Credits Scoring to ChatGPT: Overview of Neural Network Architectures

- 1** Feed Forward Neural Network (FNN) is used in applications like weather prediction, loan approval decision making etc where a decision is made on a set of inputs.
- 2** Recurrent Neural Network (RNN) is used in applications like google translator, Alexa where the output is not made in a linear way, it goes through a cycle of internal feedback loop.
- 3** Convolutional Neural Network (CNN) is widely used in image-related tasks such as facial recognition. It works by breaking down the task into smaller pieces and combines the individual results to derive a final decision.
- 4** Transformers are the base for generative AI models like ChatGPT.

Tooling for DL

- 1** PyTorch is the library that is generally used in building machine learning projects involving deep learning techniques.
- 2** PyTorch is built by Meta.
- 3** TensorFlow is another popular library built by Google.
- 4** Deep learning techniques require a lot of computing power and need GPU.
- 5** NVIDIA shifted their strategy of building GPUs for gaming purposes to building GPUs for AI applications.