Deep Learning using TenserFlow

- TensorFlow is a free and open-source software library for dataflow and differentiable programming across a range of tasks.
- It is a symbolic math library, and is also used for machine learning applications such as neural networks.
- It is used for both research and production at Google.
- TensorFlow was developed by the Google Brain team for internal Google use.
- It was released under the Apache License 2.0 on November 9, 2015.
- TensorFlow is Google Brain's second-generation system. Version 1.0.0 was released on February 11, 2017.
- While the reference implementation runs on single devices, TensorFlow can run on multiple CPUs and GPUs (with optional CUDA and SYCL extensions for general-purpose computing on graphics processing units).
- TensorFlow is available on 64-bit Linux, macOS, Windows, and mobile computing platforms including Android and iOS.
- Its flexible architecture allows for the easy deployment of computation across a variety of platforms (CPUs, GPUs, TPUs), and from desktops to clusters of servers to mobile and edge devices.
- TensorFlow computations are expressed as stateful dataflow graphs.
- The name TensorFlow derives from the operations that such neural networks perform on multidimensional data arrays, which are referred to as tensors.
- During the Google I/O Conference in June 2016, Jeff Dean stated that 1,500 repositories on GitHub mentioned TensorFlow, of which only 5 were from Google.
- In Jan 2018, Google announded TensorFlow 2.0.
- In March 2018, Google announced TensorFlow.js version 1.0 for machine learning in JavaScript and TensorFlow Graphics for deep learning in computer graphics.