Intro and Slide 1

Hi All,

I am here today to help you to understand TensorFlow. It was originally only a library for Python built by Google to allow everyday developers to build Machine Learning models for solving their everyday problems. It is now a platform that can be used for various machine learning models working in sync with other Platforms as well. It uses Keras as a backend library to execute its calculation (In case you don’t know what Keras is, it is also an open-source library to be used for scientific calculations).

Many big companies like Airbnb, Airbus, GE healthcare use TensorFlow to analyse data and build Machine Learning models for them. A few of the case studies include –

1. Airbnb – Uses photos to guide the guest’s search journey on the website. It finds information that is conveyed in the images and uses that to optimize searches. They also use Generative ML models like creating new labels by using existing image labels for unlabelled images. They are known to use a ResNet50 for their image classification which is a 50-layer deep Convolutional Neural Network.
2. Airbus – Uses Satellite Images to deliver valuable insights to clients
3. GE Healthcare – They have trained a neural network using TensorFlow to identify the anatomy on MRIs.

People have also created unique projects of their own using TensorFlow like the Piano Assistant which listens to the tune you play on your piano and plays complementary notes to it.

Slide 2

As I mentioned earlier TensorFlow can be used with other platforms as well. The most used one is the Python Package – install on a system or a server and we can start using it. The second one is the TensorFlow.js which allows to integrate ML models in the front end and back end of web applications.

TensorFlow Lite allows to run ML model on the mobile phones directly. We can train the models on servers or computers and deploy said models on mobile phones.

Since, we have only my system available which is a Windows system. I’d like to focus on the Computer version of the TensorFlow using Python.

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