AI Tutorial

IMP Links

* <https://colab.research.google.com/github/tensorflow/docs/blob/master/site/en/tutorials/quickstart/beginner.ipynb#scrollTo=he5u_okAYS4a>
* <https://www.tensorflow.org/lite/guide/hosted_models> (All Tensor Flow Models)
* <https://www.tensorflow.org/lite/examples> (Examples of Tensorflow Models)
* <https://www.tensorflow.org/lite/guide> (Starting guide for Tensorflow Model Development)
* https://www.tensorflow.org/lite/guide/android (Guide for Tensorflow Model Dveelopment on Android)
* TensorFlow Lite is a set of tools that enables on-device machine learning by helping developers run their models on mobile, embedded, and edge devices.

**Development workflow**

### **1. Generate a TensorFlow Lite model**

A TensorFlow Lite model is represented in a special efficient portable format known as [FlatBuffers](https://google.github.io/flatbuffers/). This provides several advantages over TensorFlow's protocol buffer model format such as reduced size (small code footprint) and faster inference (data is directly accessed without an extra parsing/unpacking step) that enables TensorFlow Lite to execute efficiently on devices with limited compute and memory resources.

You can generate a TensorFlow Lite model in the following ways:

* **Use an existing TensorFlow Lite model:** Refer to [TensorFlow Lite Examples](https://www.tensorflow.org/lite/examples) to pick an existing model. Models may or may not contain metadata.
* **Create a TensorFlow Lite model:** Use the [TensorFlow Lite Model Maker](https://www.tensorflow.org/lite/guide/model_maker) to create a model with your own custom dataset. By default, all models contain metadata.
* **Convert a TensorFlow model into a TensorFlow Lite model:** Use the [TensorFlow Lite Converter](https://www.tensorflow.org/lite/convert/index) to convert a TensorFlow model into a TensorFlow Lite model. During conversion, you can apply [optimizations](https://www.tensorflow.org/lite/performance/model_optimization) such as [quantization](https://www.tensorflow.org/lite/performance/post_training_quantization) to reduce model size and latency with minimal or no loss in accuracy. By default, all models don't contain metadata.