```
INFO:tensorflow:Step 10000 per-step time 1.071s
I0731 00:00:44.617192 136147738234880 model_lib_v2.py:705] Step 10000 per-step ti
INFO:tensorflow:{'Loss/classification_loss': 0.21222977,
 'Loss/localization_loss': 0.13380393,
 'Loss/regularization_loss': 0.14440468,
 'Loss/total_loss': 0.49043837,
 'learning_rate': 0.07352352}
I0731 00:00:44.617623 136147738234880 model_lib_v2.py:708] {'Loss/classification_
 'Loss/localization_loss': 0.13380393,
 'Loss/regularization_loss': 0.14440468,
 'Loss/total_loss': 0.49043837,
 'learning_rate': 0.07352352}
```

Convert Model to TensorFlow Lite

Alright! Our model is all trained up and ready to be used for detecting objects. First, we need to export the model graph (a file that contains information about the architecture and weights) to a TensorFlow Lite-compatible format. We'll do this using the export_tflite_graph_tf2.py script.

```
# Make a directory to store the trained TFLite model
!mkdir /content/custom_model_lite
output_directory = '/content/custom_model_lite'

# Path to training directory (the conversion script automatically chooses the highest che
last_model_path = '/content/training'

!python /content/models/research/object_detection/export_tflite_graph_tf2.py \
    --trained_checkpoint_dir {last_model_path} \
    --output_directory {output_directory} \
    --pipeline_config_path {pipeline_file}
```

```
2024-07-31 00:01:23.425550: W tensorflow/python/util/util.cc:368] Sets are not cu
I0731 00:01:24.366835 135295721340928 api.py:441] feature_map_spatial_dims: [(40,
WARNING:tensorflow:Skipping full serialization of Keras layer <object_detection.m
W0731 00:01:26.155341 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <keras.layers.convo
W0731 00:01:26.390223 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <object_detection.c
W0731 00:01:26.390450 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <keras.layers.core.
W0731 00:01:26.390567 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <keras.layers.convo
W0731 00:01:26.390658 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <object_detection.c
W0731 00:01:26.390749 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <keras.layers.core.
W0731 00:01:26.390829 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <keras.layers.convo
W0731 00:01:26.390903 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <object_detection.c
W0731 00:01:26.390978 135295721340928 save_impl.py:71] Skipping full serializatic
WARNING:tensorflow:Skipping full serialization of Keras layer <keras.layers.core.
```