Exporting a trained model for inference

🔥 TensorFlow 1.15

After your model has been trained, you should export it to a TensorFlow graph proto. A checkpoint will typically consist of three files:

- model.ckpt-${CHECKPOINT_NUMBER}.data-00000-of-00001
- model.ckpt-${CHECKPOINT_NUMBER}.index
- model.ckpt-${CHECKPOINT_NUMBER}.meta

After you've identified a candidate checkpoint to export, run the following command from tensorflow/models/research:

```
# From tensorflow/models/research/
INPUT_TYPE=image_tensor
PIPELINE_CONFIG_PATH={path to pipeline config file}
TRAINED_CKPT_PREFIX={path to model.ckpt}
EXPORT_DIR={path to folder that will be used for export}
python object_detection/export_inference_graph.py \
    --input_type=${INPUT_TYPE} \
    --pipeline_config_path=${PIPELINE_CONFIG_PATH} \
    --trained_checkpoint_prefix=${TRAINED_CKPT_PREFIX} \
    --output_directory=${EXPORT_DIR}
```

NOTE: We are configuring our exported model to ingest 4-D image tensors. We can also configure the exported model to take encoded images or serialized `tf.Example` s.

After export, you should see the directory ${EXPORT_DIR} containing the following:

- saved_model/, a directory containing the saved model format of the exported model
- frozen_inference_graph.pb, the frozen graph format of the exported model
- model.ckpt.*, the model checkpoints used for exporting
- checkpoint, a file specifying to restore included checkpoint files
- pipeline.config, pipeline config file for the exported model