Keras

tensorflow

- yay bazelisk

```
git clone ...
```

edit configure.py and modify *TF*MAX*BAZEL*VERSION = '1.2.1'

```
./configure
```

this produce .tf*configure.bazelrc <code> build –action*env PYTHON*BIN*PATH="/lab/gianoobserver/lib/bin/python" build –action*env PYTHON*LIB*PATH="/lab/gianoobserver/lib/lib/python3.8/site-packages" build –python*path="/lab/gianoobserver/lib/bin/python" build:xla –define with*xla*support=true build –config=xla build –action*env CUDA*TOOLKIT*PATH="/usr/local/cuda" build –action*env TF*CUDA*COMPUTE*CAPABILITIES="6.1" build –action*env LD*LIBRARY*PATH="/lab/dnn/lib/lib" build –action*env GCC*HOST*COMPILER*PATH="/usr/bin/gcc-8" build –config=cuda build:opt –copt=-march=native build:opt –copt=-Wno-sign-compare build:opt –host*copt=-march=native build:opt –define with*default*optimizations=true test –flaky*test*attempts=3 test –test*size*filters=small,medium test –test*tag*filters=-benchmark-test,-no*oss,-gpu,-oss*serial test –build*tag*filters=-benchmark-test,-no*oss,-gpu build –action*env TF*CONFIGURE_IOS="0" </code>

compile

```
bazelisk build //tensorflow/tools/pip_package:build_pip_package
./bazel-bin/tensorflow/tools/pip_package/build_pip_package
/tmp/tensorflow_pkg
pip install /tmp/tensorflow_pkg/tensorflow*.whl
```

from keras to opencv

- https://github.com/adoval4/keras_to_OpenCV_tensorflow

Export protobuf

prereq

```
bazel build tensorflow/python/tools:freeze_graph
```

```
import argparse
ap = argparse.ArgumentParser()
ap.add_argument('--input', required=True)
ap.add_argument('--output', default="/tmp/model/ckpt")
```

```
args = ap.parse_args()

from keras import backend as K
from keras.models import load_model
import tensorflow as tf

K.set_learning_phase(0)

# create model and load weights or ...
# model = create_model()
# model.load_weights(args.input)

# ... load h5 model
load_model(args.input)

saver = tf.train.Saver()
saver.save(K.get_session(), args.default)
print("Output node needed in freeze_graph: %s" % model.output.op.name)
print("Model created in: %s" % args.output)
```

result

```
/tmp/model
├── checkpoint
├── ckpt.data-00000-of-00001
├── ckpt.index
└── ckpt.meta
```

freeze

```
bazel-bin/tensorflow/python/tools/freeze_graph \
--input_meta_graph=/tmp/model/ckpt.meta  \
--input_checkpoint=/tmp/model/ckpt \
--output_graph=frozen_graph.pb \
--input_binary \
--output_node_names="previous output node name"
```

From:
https://wiki.csgalileo.org/ - **Galileo Labs**

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https://wiki.csgalileo.org/tips/keras?rev=1575921649

Last update: **2019/12/09 21:00**