**My GitHub:** [**https://github.com/MariusLandmann/SmartSystems\_CNN\_TrafficLightDetection**](https://github.com/MariusLandmann/SmartSystems_CNN_TrafficLightDetection)

**Sources used for the created neural networks**

**Colab**

<https://research.google.com/colaboratory/faq.html#resource-limits>

**General**

<https://wiki.python.org/moin/UnicodeDecodeError>

<https://www.dlology.com/blog/how-to-run-tensorflow-object-detection-model-on-jetson-nano/>

<https://www.tensorflow.org/api_docs/python/tf/compat/v1/app/run>

<https://mike632t.wordpress.com/2016/03/22/implementing-cat-in-python/>

<https://abseil.io/docs/python/guides/app>

<https://github.com/abseil/abseil-py>

<https://github.com/jkjung-avt/keras_imagenet/blob/master/train.py#L88>

<https://www.tensorflow.org/api_docs/python/tf/nn/conv2d_transpose>

<https://www.tensorflow.org/api_docs/python/tf/keras/Sequential>

**Tutorials**

General

<https://open.hpi.de/courses/neuralnets2020>

<https://medium.com/@hewani.co/building-a-simple-convolutional-neural-net-with-own-data-c0ee8654bacb>

<https://towardsdatascience.com/all-the-steps-to-build-your-first-image-classifier-with-code-cf244b015799>

<https://github.com/EdjeElectronics/TensorFlow-Object-Detection-API-Tutorial-Train-Multiple-Objects-Windows-10>

<https://keras.io/guides/sequential_model/>

<https://www.tensorflow.org/tutorials/images/cnn>

<https://www.youtube.com/watch?v=oFFbKogYdfc>

<https://www.youtube.com/watch?v=TOP2aLxcuu8>

<https://www.youtube.com/watch?v=ChidCgtd1Lw>

TFRecords

<https://androidkt.com/feeding-your-own-data-set-into-the-cnn-model-in-tensorflow/>

<https://towardsdatascience.com/working-with-tfrecords-and-tf-train-example-36d111b3ff4d>

<https://www.dlology.com/blog/how-to-leverage-tensorflows-tfrecord-to-train-keras-model/>

<https://jkjung-avt.github.io/tfrecords-for-keras/>

<https://github.com/jkjung-avt/keras_imagenet>

<https://medium.com/@teyou21/training-your-object-detection-model-on-tensorflow-part-2-e9e12714bdf>

<https://www.youtube.com/watch?v=oxrcZ9uUblI>

<https://github.com/Hvass-Labs/TensorFlow-Tutorials/blob/master/18_TFRecords_Dataset_API.ipynb>

<https://www.tensorflow.org/guide/data#consuming_tfrecord_data>

TPU

<https://medium.com/analytics-vidhya/tpu-training-made-easy-with-colab-3b73b920878f>

Dataset

<https://www.tensorflow.org/datasets/add_dataset#adding_the_dataset_to_tensorflowdatasets>

<https://mc.ai/create-your-own-custom-dataset/>

With Fashion-MNIST

<https://github.com/Hvass-Labs/TensorFlow-Tutorials>

<https://machinelearningmastery.com/how-to-develop-a-cnn-from-scratch-for-fashion-mnist-clothing-classification/>

<https://github.com/zalandoresearch/fashion-mnist>

<https://www.coursehero.com/file/49430530/util-mnist-readerpy/>

https://medium.com/analytics-vidhya/my-first-image-classifying-model-fashion-mnist-89c85f4aa4e1

**DeepPiCar**

<https://github.com/dctian/DeepPiCar>

<https://towardsdatascience.com/deeppicar-part-1-102e03c83f2c>

<https://towardsdatascience.com/deeppicar-part-2-8512be2133f3>

<https://towardsdatascience.com/deeppicar-part-3-d648b76fc0be>

<https://towardsdatascience.com/deeppicar-part-6-963334b2abe0>

**Debugging**

TFRecord

<https://stackoverflow.com/questions/50728376/create-predictions-with-custom-cnn-using-tfrecord-input>

<https://stackoverflow.com/questions/58258003/attributeerror-module-tensorflow-has-no-attribute-app>

<https://github.com/tensorflow/models/issues/7657>

<https://github.com/tensorflow/models/issues/1591>

<https://github.com/tensorflow/models/issues/1595>

<https://github.com/tensorflow/models/issues/6148>

<https://www.gitmemory.com/issue/tensorflow/models/6805/496125452>

<https://stackoverflow.com/questions/50497648/training-tensorflow-detection-api-on-colaboratory>

General

<https://stackoverflow.com/questions/57248121/value-error-in-cnn-keras-fit-generator-call-back>

<https://github.com/keras-team/keras/issues/8237>

<https://github.com/tensorflow/tensorflow/issues/32279>

<https://stackoverflow.com/questions/51038503/tensorflow-list-index-out-of-range-with-conv2d-transpose/51038959>

<https://github.com/keras-team/keras/issues/1091>

<https://stackoverflow.com/questions/56155048/how-to-fix-indexerror-list-index-out-of-range-in-tensorflow>

<https://stackoverflow.com/questions/45755022/cannot-add-layers-to-saved-keras-model-model-object-has-no-attribute-add>

<https://github.com/keras-team/keras/issues/6710>

<https://stackoverflow.com/questions/47262955/how-to-import-keras-from-tf-keras-in-tensorflow>

<https://github.com/tensorflow/tensorflow/issues/136>

<https://stackoverflow.com/questions/54607989/pandas-attributeerror-dataframe-object-has-no-attribute-map/54608192>

**Used Code**

<https://github.com/dctian/DeepPiCar/blob/master/models/object_detection/code/xml_to_csv.py>

<https://github.com/dctian/DeepPiCar/blob/master/models/object_detection/code/generate_tfrecord.py>