

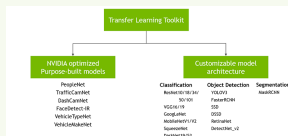
Introduction

NVIDIA Transfer Learning Toolkit (TLT) is a simple, easy-to-use training toolkit that requires minimal to zero coding to create vision AI models using the user's own data. This cheatsheet is created by Ness, version 2020.11.14.

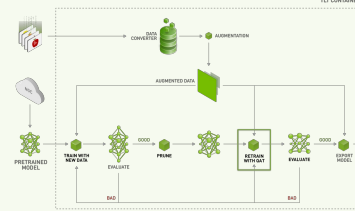
tlt stack



tlt modles



tlt workflow



tlt-augment

```
-d /path/to/the/dataset/root
-a /path/to/augmentation/spec
-e <file>
-o /path/to/the/augmented/output
[-v]
```

tlt-dataset-convert

```
-d DATASET_EXPORT_SPEC
-o OUTPUT_FILENAME
[-f VALIDATION_FOLD]
```

spec files

Experiment Spec File

tlt-train

```
classification --gpus <num GPUs>
-k <encoding key>
-r <result directory>
-e <spec file>
```

tlt-evaluate classification

```
-e <experiment_spec_file>
-k <key>

tlt-evaluate detectnet_v2
-e <experiment_spec_file>
-m <model_file>
-k <key>
[--use_training_set]
```

tlt-prune

```
tlt-prune [-h]
-pm <pretrained_model>
-o <output_file> -k <key>
[-n <normalizer>]
[-eq <equalization_criterion>]
[-pg <pruning_granularity>]
[-pth <pruning_threshold>]
[-nf <min_num_filters>]
[-el <excluded_list>]
```

tlt-int8-tensorfile

```
tlt-int8-tensorfile {classification,
detectnet_v2} [-h]
-e <path to training experiment
spec file>
-o <path to output tensorfile>
-m <maximum number of
batches to serialize>
[--use_validation_set]
```

tlt-export

```
tlt-export [-h] {classification,
detectnet_v2, ssd, dssd, faster-
_rcnn, yolo, retinanet}
-m <path to the .tlt model file
generated by tlt train>
-k <key>
[-o <path to output file>]
[--cal_data_file <path to tensor
file>]
[--cal_image_dir <path to the
directory images to calibrate the
model>]
[--cal_cache_file <path to output
calibration file>]
[--data_type <Data type for the
TensorRT backend during
export>]
[--batches <Number of batches
to calibrate over>]
[--max_batch_size <maximum
trt batch size>]
[--max_workspace_size <ma-
ximum workspace size>]
[--batch_size <batch size to
TensorRT engine>]
[--experiment_spec <path to
experiment spec file>]
[--engine_file <path to the
TensorRT engine file>]
[--verbose Verbosity of the
logger]
[--force_ptq Flag to force PTQ]
```