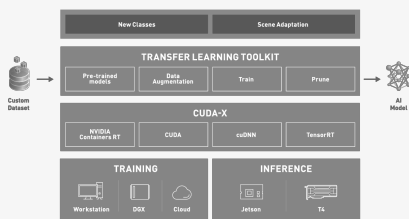


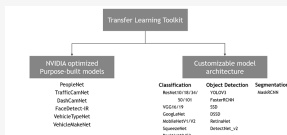
Introduction

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.

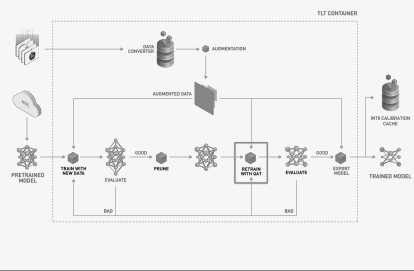
tlt stack



tlt modles



tlt workflow



tlt-augment

```
-d /path/to/the/dataset/root
-a /path/to/augmentation/spec/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 <maximum 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]
```