

References for Code

Loading the CIFAR-10 dataset and checking number of GPUs available:

- <https://www.tensorflow.org/guide/gpu>
- https://www.tensorflow.org/api_docs/python/tf/keras/datasets/cifar10/load_data

Creating and training the 3D-CNN and 3D-CNN-SVM backbones:

- <https://www.tensorflow.org/tutorials/images/cnn>
- <https://www.tensorflow.org/tutorials/keras/classification>
- https://scikit-learn.org/stable/modules/generated/sklearn.model_selection.GridSearchCV.html

Generating the confusion matrices:

- https://scikit-learn.org/stable/modules/generated/sklearn.metrics.confusion_matrix.html
- <https://scikit-learn.org/stable/modules/generated/sklearn.metrics.ConfusionMatrixDisplay.html#sklearn.metrics.ConfusionMatrixDisplay>

Creating the Unsupervised Active Learning approach:

- <https://scikit-learn.org/stable/modules/generated/sklearn.cluster.KMeans.html>
- <https://scikit-learn.org/stable/modules/generated/sklearn.manifold.TSNE.html>

TensorFlow implementation of SimCLR:

- <https://github.com/sthalles/SimCLR-tensorflow>
- <https://github.com/sayakpaul/SimCLR-in-TensorFlow-2>
- https://keras.io/examples/vision/semisupervised_simclr/
- <https://www.kaggle.com/code/heyytanay/training-using-simclr-in-tensorflow>
- https://fastestimator.org/r1.5/apphub/contrastive_learning/simclr/simclr.html