

Quick setup procedure to run the dnn module example scenes (Use downloader script) :

- Run the “download_dnn_models.py” in “Assets/StreamingAssets/dnn/” folder.
 - Download the models for all dnn examples:

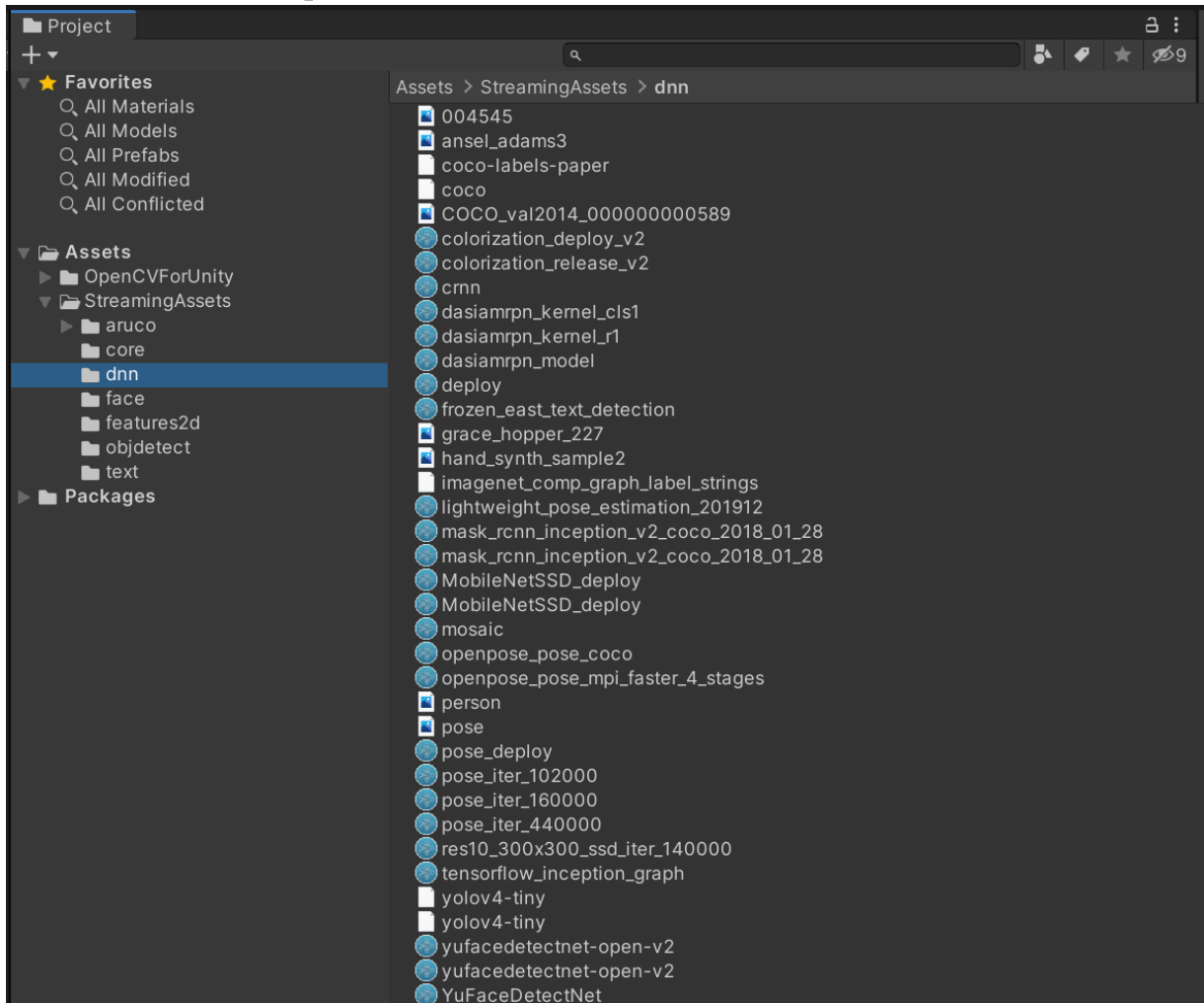
```
python download_dnn_models.py
```

- Or download the models for each individual dnn example:

```
python download_dnn_models.py DaSiamRPNTrackerExample
```

- Additional Setup for **TextOCRExample** :
 - Generate “crnn.onnx” according to the instructions in “TextOCRExample\Readme_how_to_export_onnx_model.txt”.
 - Copy “crnn.onnx” to “Assets/StreamingAssets/dnn/” folder.

Screenshot after the setup



Quick setup procedure to run the dnn module example scenes (Manually) :

- Setup for **ColorizationExample** :
 - Download
["https://github.com/richzhang/colorization/raw/caffe/demo/imgs/ansel_adams3.jpg"](https://github.com/richzhang/colorization/raw/caffe/demo/imgs/ansel_adams3.jpg).
 - Copy "ansel_adams3.jpg" to "Assets/StreamingAssets/dnn/" folder.
 - Download
["http://eecs.berkeley.edu/~rich.zhang/projects/2016_colorization/files/demo_v2/colorization_release_v2.caffemodel"](http://eecs.berkeley.edu/~rich.zhang/projects/2016_colorization/files/demo_v2/colorization_release_v2.caffemodel).
 - Copy "colorization_release_v2.caffemodel" to "Assets/StreamingAssets/dnn/" folder.
 - Download
["https://github.com/richzhang/colorization/raw/caffe/models/colorization_deploy_v2.prototxt"](https://github.com/richzhang/colorization/raw/caffe/models/colorization_deploy_v2.prototxt).
 - Copy "colorization_deploy_v2.prototxt" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **DaSiamRPNTrackerExample** :
 - Download
["https://www.dropbox.com/s/rr1lk9355vzolqv/dasiamrpn_model.onnx?dl=1"](https://www.dropbox.com/s/rr1lk9355vzolqv/dasiamrpn_model.onnx?dl=1).
Copy "dasiamrpn_model.onnx" to "Assets/StreamingAssets/dnn/" folder.
 - Download
["https://www.dropbox.com/s/999cq5zrfi7w4p/dasiamrpn_kernel_r1.onnx?dl=1"](https://www.dropbox.com/s/999cq5zrfi7w4p/dasiamrpn_kernel_r1.onnx?dl=1). Copy "dasiamrpn_kernel_r1.onnx" to "Assets/StreamingAssets/dnn/" folder.
 - Download
["https://www.dropbox.com/s/qvmstszx5h339a0w/dasiamrpn_kernel_cls1.onnx?dl=1"](https://www.dropbox.com/s/qvmstszx5h339a0w/dasiamrpn_kernel_cls1.onnx?dl=1).
 - Copy "dasiamrpn_kernel_cls1.onnx" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **FastNeuralStyleTransferExample** :
 - Download
["https://cs.stanford.edu/people/jcjohns/fast-neural-style/models/instance_norm_mosaic.t7"](https://cs.stanford.edu/people/jcjohns/fast-neural-style/models/instance_norm_mosaic.t7).
 - Copy "mosaic.t7" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **LibFaceDetectionV2Example** :
 - Download
["https://github.com/ShiqiYu/libfacedetection/raw/96a7cc0bbfcf05bac17c2df52bee0e8ba6c72964/models/caffe/yufacedetectnet-open-v2.caffemodel"](https://github.com/ShiqiYu/libfacedetection/raw/96a7cc0bbfcf05bac17c2df52bee0e8ba6c72964/models/caffe/yufacedetectnet-open-v2.caffemodel).
 - Copy "yufacedetectnet-open-v2.caffemodel" to "Assets/StreamingAssets/dnn/" folder.
 - Download
["https://github.com/ShiqiYu/libfacedetection/raw/96a7cc0bbfcf05bac17c2df52bee0e8ba6c72964/models/caffe/yufacedetectnet-open-v2.prototxt"](https://github.com/ShiqiYu/libfacedetection/raw/96a7cc0bbfcf05bac17c2df52bee0e8ba6c72964/models/caffe/yufacedetectnet-open-v2.prototxt).
 - Copy "yufacedetectnet-open-v2.prototxt" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **LibFaceDetectionV3Example** :
 - Download
["https://github.com/opencv/opencv_zoo/raw/8a872fbf5ebb5e8fdc21f869f63b352c9b9f3c2b/models/face_detection_yunet/face_detection_yunet_2021dec.onnx"](https://github.com/opencv/opencv_zoo/raw/8a872fbf5ebb5e8fdc21f869f63b352c9b9f3c2b/models/face_detection_yunet/face_detection_yunet_2021dec.onnx).

- Rename “face_detection_yunet_2021dec.onnx” to “YuFaceDetectNet.onnx”.
- Copy “YuFaceDetectNet.onnx” to “Assets/StreamingAssets/dnn/” folder.
- Setup for **LightweightPoseEstimationExample** :
 - Download
[“https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/pose.png”](https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/pose.png).
 - Copy “pose.png” to “Assets/StreamingAssets/dnn/” folder.
 - Download
[“https://drive.google.com/uc?export=download&id=1-lj_gIzCeNA488u5TA4FqWMMdxBqOji”](https://drive.google.com/uc?export=download&id=1-lj_gIzCeNA488u5TA4FqWMMdxBqOji).
 - Copy “lightweight_pose_estimation_201912.onnx” to “Assets/StreamingAssets/dnn/” folder.
- Setup for **MaskRCNNExample** :
 - Download
[“https://github.com/chuanqi305/MobileNet-SSD/raw/master/images/004545.jpg”](https://github.com/chuanqi305/MobileNet-SSD/raw/master/images/004545.jpg).
 - Copy “004545.jpg” to “Assets/StreamingAssets/dnn/” folder.
 - Download and unzip
[“http://download.tensorflow.org/models/object_detection/mask_rcnn_inception_v2_coco_2018_01_28.tar.gz”](http://download.tensorflow.org/models/object_detection/mask_rcnn_inception_v2_coco_2018_01_28.tar.gz).
 - Rename
 “mask_rcnn_inception_v2_coco_2018_01_28/frozen_inference_graph.pb” to
 “mask_rcnn_inception_v2_coco_2018_01_28.pb”.
 - Copy “mask_rcnn_inception_v2_coco_2018_01_28.pb” to “Assets/StreamingAssets/dnn/” folder.
 - Delete “mask_rcnn_inception_v2_coco_2018_01_28.tar.gz” and “mask_rcnn_inception_v2_coco_2018_01_28” folder.
 - Download
[“https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/mask_rcnn_inception_v2_coco_2018_01_28.pbtxt”](https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/mask_rcnn_inception_v2_coco_2018_01_28.pbtxt).
 - Copy “mask_rcnn_inception_v2_coco_2018_01_28.pbtxt” to “Assets/StreamingAssets/dnn/” folder.
 - Download
[“https://github.com/amikelive/coco-labels/raw/master/coco-labels-paper.txt”](https://github.com/amikelive/coco-labels/raw/master/coco-labels-paper.txt).
 - Copy “mscoco_labels.names” to
 “Assets/StreamingAssets/dnn/”
https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/mask_rcnn_inception_v2_coco_2018_01_28.pbtxt” folder.
- Setup for **MobileNetSSDExample** :
 - Download
[“https://github.com/chuanqi305/MobileNet-SSD/raw/master/images/004545.jpg”](https://github.com/chuanqi305/MobileNet-SSD/raw/master/images/004545.jpg).
 - Copy “004545.jpg” to “Assets/StreamingAssets/dnn/” folder.
 - Download
[“https://github.com/PINTO0309/MobileNet-SSD-RealSense/raw/master/caffemodel/MobileNetSSD/MobileNetSSD_deploy.caffemodel”](https://github.com/PINTO0309/MobileNet-SSD-RealSense/raw/master/caffemodel/MobileNetSSD/MobileNetSSD_deploy.caffemodel).
 - Copy “MobileNetSSD_deploy.caffemodel” to “Assets/StreamingAssets/dnn/” folder.
 - Download
[“https://github.com/chuanqi305/MobileNet-SSD/raw/f5d072ccc7e3dcdadaa830e9”](https://github.com/chuanqi305/MobileNet-SSD/raw/f5d072ccc7e3dcdadaa830e9).

[805da4bf1000b2836/MobileNetSSD_deploy.prototxt](https://github.com/CMU-Perceptual-Computing-Lab/openpose/raw/master/examples/media/COCO_val2014_000000000589.jpg)".

- Copy "MobileNetSSD_deploy.prototxt" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **OpenPoseExample** :
 - MPI
 - Download
"https://github.com/CMU-Perceptual-Computing-Lab/openpose/raw/master/examples/media/COCO_val2014_000000000589.jpg".
 - Copy "COCO_val2014_000000000589.jpg" to "Assets/StreamingAssets/dnn/" folder.
 - Download
"http://posefs1.perception.cs.cmu.edu/OpenPose/models/pose/mpi/pose_iter_160000.caffemodel".
 - Copy "pose_iter_160000.caffemodel" to "Assets/StreamingAssets/dnn/" folder.
 - Download
"https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/openpose_pose_mpi_faster_4_stages.prototxt".
 - Copy "openpose_pose_mpi_faster_4_stages.prototxt" to "Assets/StreamingAssets/dnn/" folder.
 - COCO
 - Download
"http://posefs1.perception.cs.cmu.edu/OpenPose/models/pose/coco/pose_iter_440000.caffemodel".
 - Copy "pose_iter_440000.caffemodel" to "Assets/StreamingAssets/dnn/" folder.
 - Download
"https://github.com/opencv/opencv_extra/raw/4.x/testdata/dnn/openpose_pose_coco.prototxt".
 - Copy "openpose_pose_coco.prototxt" to "Assets/StreamingAssets/dnn/" folder.
 - HAND
 - Download
"https://github.com/ortegatron/hand_detector_train/raw/master/images/hand_synth_sample2.jpg".
 - Copy "hand_synth_sample2.jpg" to "Assets/StreamingAssets/dnn/" folder.
 - Download
"http://posefs1.perception.cs.cmu.edu/OpenPose/models/hand/pose_iter_102000.caffemodel".
 - Copy "pose_iter_102000.caffemodel" to "Assets/StreamingAssets/dnn/" folder.
 - Download
"https://github.com/CMU-Perceptual-Computing-Lab/openpose/raw/master/models/hand/pose_deploy.prototxt".
 - Copy "pose_deploy.prototxt" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **ResnetSSDFaceDetectionExample** :
 - Download

- ["https://github.com/opencv/opencv_3rdparty/raw/dnn_samples_face_detector_20170830/res10_300x300_ssd_iter_140000.caffemodel"](https://github.com/opencv/opencv_3rdparty/raw/dnn_samples_face_detector_20170830/res10_300x300_ssd_iter_140000.caffemodel).
 - Copy "res10_300x300_ssd_iter_140000.caffemodel" to "Assets/StreamingAssets/dnn/" folder.
 - Download ["https://github.com/opencv/opencv/raw/master/samples/dnn/face_detector_deploy.prototxt"](https://github.com/opencv/opencv/raw/master/samples/dnn/face_detector_deploy.prototxt).
 - Copy "deploy.prototxt" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **TensorflowInceptionExample** :
 - Download and unzip ["https://storage.googleapis.com/download.tensorflow.org/models/inception5h.zip"](https://storage.googleapis.com/download.tensorflow.org/models/inception5h.zip)
 - Copy "inception5h/tensorflow_inception_graph.pb" and "inception5h/imagenet_comp_graph_label_strings.txt" to "Assets/StreamingAssets/dnn/" folder.
 - Delete "inception5h.zip" and "inception5h" folder.
- Setup for **TextOCRExample** :
 - Download and unzip ["https://www.dropbox.com/s/r2ingd0l3zt8hxs/frozen_east_text_detection.tar.gz?dl=1"](https://www.dropbox.com/s/r2ingd0l3zt8hxs/frozen_east_text_detection.tar.gz?dl=1).
 - Copy "frozen_east_text_detection/frozen_east_text_detection.pb" to "Assets/StreamingAssets/dnn/" folder.
 - Delete "frozen_east_text_detection.tar.gz" and "frozen_east_text_detection" folder.
 - Generate "crnn.onnx" according to the instructions in "TextOCRExample\Readme_how_to_export_onnx_model.txt".
 - Copy "crnn.onnx" to "Assets/StreamingAssets/dnn/" folder.
- Setup for **YoloObjectDetectionExample** :
 - Download ["https://github.com/pjreddie/darknet/raw/master/data/person.jpg"](https://github.com/pjreddie/darknet/raw/master/data/person.jpg).
 - Copy "person.jpg" to "Assets/StreamingAssets/dnn/" folder.
 - Download ["https://github.com/AlexeyAB/darknet/raw/master/cfg/yolov4-tiny.cfg"](https://github.com/AlexeyAB/darknet/raw/master/cfg/yolov4-tiny.cfg).
 - Copy "yolov4-tiny.cfg" to "Assets/StreamingAssets/dnn/" folder.
 - Download ["https://github.com/AlexeyAB/darknet/releases/download/darknet_yolo_v4_pre/yolov4-tiny.weights"](https://github.com/AlexeyAB/darknet/releases/download/darknet_yolo_v4_pre/yolov4-tiny.weights).
 - Copy "yolov4-tiny.weights" to "Assets/StreamingAssets/dnn/" folder.
 - Download ["https://github.com/pjreddie/darknet/raw/master/data/coco.names"](https://github.com/pjreddie/darknet/raw/master/data/coco.names).
 - Copy "coco.names" to "Assets/StreamingAssets/dnn/" folder.