Intel(R) Corporation

Models Supported by OpenVINO™ toolkit.

The OpenVINO team continues the effort to support as many models out-of-the-box as possible. Based on our research and user feedback, we prioritize the most common models and test them before every release. These supported models include but aren't limited to the models listed in the tables below. A detailed model list can be downloaded in PDF format.

If a model is not included in the list below but is similar to one included in the list, it is nonetheless very likely it will run on OpenVINO™.

Should a model fail to execute properly there are a few options available:

- If the model originates from a framework like TensorFlow or PyTorch OpenVINO™ offers a hybrid solution where the original model can be run without explicit conversion into OpenVINO-format, more information at (https://docs.openvino.ai/latest/ovtf_integration.html).
- Another possibility is to create a GitHub request for the operation(s) that are missing. These requests are reviewed regularly. A reply will be provided detailing if and how the request will be accommodated. Additionally, your request may trigger a reply from someone in the community who can help.
- Finally, as OpenVINO™ is open source it is encouraged and appreciated for users to enhance OpenVINO™ through their contributions to the github repo. To learn more, please check the articles on OpenVINO Extensibility (https://docs.openvino.ai/latest/openvino_docs_Extensibility_UG_Intro.html).

The category list below includes 300+ models and is representative of models supported by OpenVINO™. The table below summarizes the number of models

Model Categories:	Number of Models:	Model Categories:	Number of Models:
Object Detection	149	Image Classification	68
Instance Segmentation	3	Image Classifiation, Dual Path Network	1
Semantic Segmentation	19	Image Classifiation, Emotion	1
Image Processing, Enhancement	16	Image Translation	1
Monodepth	2	Natural language Processing	35
Colorization	2	Text Detection	18
Behavior / Decision Prediction	1	Audio Enhancement	3
Action Recognition	2	Sound Classification	2
Time Series Forecasting	1		

Model Category:	Number of models:	Model Category:	Number of models:
Object Detection	**149**	**Image Classification**	**68**
ctdet_coco_dlav0_512		*age-gender-recognition-retail-0013*	
detr_resnet50		*alexnet*	
efficientdet-d0		*anti-spoof-mn3*	
efficientdet-d1		*asl-recognition-0003*	
efficientnet-b0		*asl-recognition-0004*	

efficientnet-v2-m		*brain-tumor-segmentation-0001*	
faceboxes		*brain-tumor-segmentation-0002*	
face-detection-0200		*caffenet*	
face-detection-0202		*common-sign-language-0001*	
face-detection-0204		*common-sign-language-0002*	
face-detection-0205		*densenet-121*	
face-detection-0206		*dla-34*	
face-detection-adas-0001		*east_resnet_v1_50*	
face-detection-retail-0004		*googlenet-v1*	
face-detection-retail-0005		*googlenet-v2*	
face-detection-retail-0044		*googlenet-v3*	
facenet-20180408-102900		*googlenet-v4*	
face-person-detection-retail-0002		*hbonet-0.25*	
face-recognition-resnet100-arcface		*hbonet-1.0*	
face-recognition-resnet50-arcface		*image-retrieval-0001*	
face-recognition-resnet50-aws		*inception-resnet-v2*	
face-reidentification-retail-0095		*inceptionv3-int8-onnx-0001*	
facial-landmarks-35-adas-0002		*mixnet-l*	
facial-landmarks-98-detection-0001		*netvlad*	
faster_rcnn_inception_resnet_v2_atrous_coco		*nfnet-f0*	
faster_rcnn_inception_v2_coco		*octave-resnet-26-0.25*	
faster_rcnn_resnet101_coco		*octave-resnext-101-0.25*	
faster_rcnn_resnet50_coco		*open-closed-eye-0001*	
faster_rcnn_resnet50_fpn_coco		*regnetx-3.2gf*	
faster-rcnn-resnet101-coco-sparse-60-0001		*se-inception*	
fastscnn		*se-resnet-50*	
gaze-estimation-adas-0002		*se-resnext-101*	
head-pose-estimation-adas-0001		*shufflenet-v2-x0.5*	
hg-s8-b1-mpii		*shufflenet-v2-x1.0*	
higher-hrnet-w32-512		*Sphereface*	
human-pose-estimation-0001		*squeezenet1.0*	
human-pose-estimation-0002		*swin-tiny-patch4-window7-224*	
human-pose-estimation-0003		*t2t-vit-14*	
human-pose-estimation-0004		*t2t-vit-7*	
human-pose-estimation-0005		*vehicle-attributes-recognition-barrier-0039*	
human-pose-estimation-0006		*vehicle-attributes-recognition-barrier-0042*	
human-pose-estimation-0007		*vehicle-reid-0001*	
human-pose-estimation-3d-0001		*vgg16*	

instance-segmentation-person-0007		*vgg19*	
instance-segmentation-security-0002		*weld-porosity-detection-0001*	
instance-segmentation-security-0010		*repvgg-a0*	
instance-segmentation-security-0050		*repvgg-b1*	
instance-segmentation-security-0083		*repvgg-b3*	
instance-segmentation-security-0091		*resnest-50-pytorch*	
instance-segmentation-security-0228		*resnet-101*	
instance-segmentation-security-1025		*resnet-152*	
instance-segmentation-security-1039		*resnet-18*	
instance-segmentation-security-1040		*resnet18-dorefa-binary-onnx-0001*	
landmarks-regression-retail-0009		*resnet18-xnor-binary-onnx-0001*	
mobilefacedet-v1-mxnet		*resnet-34-pytorch*	
mobilenet-ssd		*resnet-50*	
mobilenet-v1-0.25-128		*resnet50_ssd_gluoncv*	
mobilenet-v1-1.0-224		*resnet50-binary-0001*	
mobilenet-v2		*resnet50-int8-onnx-0001*	
mobilenet-v2-1.0-224		*resnet-50-pytorch*	
mobilenet-v2-1.4-224		*resnet-50-tf*	
mobilenetv2-int8-onnx-0001		*resnext101-32x16d-swsl*	
mobilenet-v3-large-1.0-224		*resnext-101-32x8d*	
mobilenet-v3-small-1.0-224		*retinaface-resnet50*	
mobilenet-yolo-v4-syg		*retinanet*	
mtcnn-p		*retinanet_resnet34*	
openpose-pose		*rexnet-v1-x1.0*	
pedestrian-and-vehicle-detector-adas-0001		*rfcn-resnet101-coco*	
pedestrian-detection-adas-0002		**Image Classifiation, Dual Path Network**	**1**
pelee-coco		*dpn-68*	
person-attributes-recognition-crossroad-0230		**Image Classifiation, Emotion**	**1**
person-attributes-recognition-crossroad-0234		*emotions-recognition-retail-0003*	
person-attributes-recognition-crossroad-0238		**Image Translation**	**1**
person-detection-0100		*cocosnet*	
person-detection-0101		**Instance Segmentation**	**3**
person-detection-0102		*mask_rcnn_inception_resnet_v2_atrous_coco*	
person-detection-0106		*mask_rcnn_resnet50_atrous_coco*	
person-detection-0200		*yolact-resnet50-fpn-pytorch*	
person-detection-0201		**Semantic Segmentation**	**19**
person-detection-0202		*background-matting-mobilenetv2*	
person-detection-0203		*bisenet-v2*	

person-detection-0301
person-detection-0302
person-detection-0303
person-detection-action-recognition-0005
person-detection-action-recognition-0006

person-detection-action-recognition-teacher-0002
person-detection-asl-0001
person-detection-raisinghand-recognition-0001
person-detection-retail-0002
person-detection-retail-0013
person-reidentification-retail-0248
person-reidentification-retail-0277
person-reidentification-retail-0286
person-reidentification-retail-0287
person-reidentification-retail-0288
person-vehicle-bike-detection-2000
person-vehicle-bike-detection-2001
person-vehicle-bike-detection-2002
person-vehicle-bike-detection-2003
person-vehicle-bike-detection-2004
person-vehicle-bike-detection-crossroad-0078
person-vehicle-bike-detection-crossroad-1016

person-vehicle-bike-detection-crossroad-yolov3-1020
pp-yolo
product-detection-0001
single-human-pose-estimation-0001
single-image-super-resolution-1032
smartlab-object-detection-0001
smartlab-object-detection-0002
smartlab-object-detection-0003
smartlab-object-detection-0004
ssd_mobilenet_v1_coco
ssd_mobilenet_v1_fpn_coco
ssd300
ssd300-int8-onnx-0001
ssd300-onnx-0001

deeplabv3
deeplab-v3p-resnet50-os8
drn-d-38
fastseg-large
fastseg-small

hrnet-v2-c1-segmentation
icnet-camvid-ava-0001
icnet-camvid-ava-sparse-30-0001
icnet-camvid-ava-sparse-60-0001
icnet-camvid-onnx-0001
pspnet-pytorch
road-segmentation-adas-0001
semantic-segmentation-adas-0001
unet-2d
unet3d_mlperf
unet-camvid-int8-onnx-0001
unet-camvid-onnx-0001

Colorization **2**

colorization-siggraph
colorization-v2

Natural language Processing **35**

bert-base-cased

bert-base-ner
bert-large-uncased-whole-word-masking-squad-0001
bert-large-uncased-whole-word-masking-squad-emb-0001
bert-large-uncased-whole-word-masking-squad-int8-0001
bert-small-uncased-whole-word-masking-squad-0001
bert-small-uncased-whole-word-masking-squad-0002
bert-small-uncased-whole-word-masking-squad-emb-int8-0001
bert-small-uncased-whole-word-masking-squad-int8-0002
cnn-tdnnf
cnn-tdnnf-lstm
forward-tacotron-duration-prediction
forward-tacotron-regression
GPT-2
machine-translation-nar-de-en-0001

ssd512
ssd512-onnx
ssdlite_mobilenet_v2
ssd-resnet34-1200
tiny_yolo_v1
tiny_yolo_v2
ultra-lightweight-face-detection-rfb-320
ultra-lightweight-face-detection-slim-320
vehicle-detection-0200
vehicle-detection-0201
vehicle-detection-0202
vehicle-detection-adas-0002
vehicle-license-plate-detection-barrier-0106
vehicle-license-plate-detection-barrier-0123
yolo_v2
yolo_v3
yolo_v3_tiny
yolo_v4
yolo_v5m
yolo_v5s
yolof
yolor_p6
yolo-v2-ava-0001
yolo-v2-ava-sparse-35-0001
yolo-v2-ava-sparse-70-0001
yolo-v2-tiny-ava-0001
yolo-v2-tiny-ava-sparse-30-0001
yolo-v2-tiny-ava-sparse-60-0001
yolo-v2-tiny-vehicle-detection-0001
yolo-v4-tiny
yolox-tiny

Image Processing, Enhancement **16**

began
ebgan
edsr3_super_resolution
gmcnn-places2
hybrid-cs-model-mri
Sharpen-LensBlur

machine-translation-nar-de-en-0002
machine-translation-nar-en-de-0001
machine-translation-nar-en-de-0002
machine-translation-nar-en-ru-0002
machine-translation-nar-ru-en-0002
mobilebert
mozilla-deepspeech-0.6.1
mozilla-deepspeech-0.8.2
quartznet-15x5-en
rm_cnn4a_smbr
rm_lstm4f
roberta-base
roberta-base-mrpc
tedlium_dnn4_smbr
tedlium_lstm4f
wav2vec2-base
wavernn-rnn
wavernn-upsampler
wsj_cnn4b_smbr
wsj_dnn5b_smbr

Text Detection **18**

ctpn
handwritten-english-recognition-0001
handwritten-japanese-recognition-0001
handwritten-score-recognition-0003
handwritten-simplified-chinese-recognition-0001
horizontal-text-detection-0001
license-plate-recognition-barrier-0001
license-plate-recognition-barrier-0007
ocrnet-hrnet-w18
ocrnet-hrnet-w48
ocr-perpetuuiti
text-detection-0003
text-detection-0004
text-recognition-0012
text-recognition-0013
text-recognition-0014
text-recognition-resnet-fc

Sharpen-MotionBlur	
Sharpen-Sharpen	
single-image-super-resolution-1033	
srgan	
text-image-super-resolution-0001	
wdsr-small-x4	
robust-video-matting-mobilenetv3	
deblurgan-v2	
fbcnn	
topaz_video_super_resolution	
Monodepth	**2**
fcrn-dp-nyu-depth-v2-tf	
midasnet	

vitstr-small-patch16-224	
Sound Classification	**2**
aclnet	
aclnet-int8	
Audio Enhancement	**3**
Denoise	
noise-suppression-denseunet-ll-0001	
noise-suppression-poconetlike-0001	
Action Recognition	**2**
i3d-flow	
i3d-rgb	
Behavior / Decision Prediction	**1**
dien_alibaba	
Time Series Forecasting	**1**
time-series-forecasting-electricity-0001	