[net]

# Testing

#batch=1

#subdivisions=1

# Training

batch=64

subdivisions=16

width=416

height=416

channels=3

momentum=0.949

decay=0.0005

angle=30

saturation = 1.5

exposure = 1.5

hue=.1

flip = 0

learning\_rate=0.001

burn\_in=1000

max\_batches = 4000

policy=steps

steps=3200,3600

scales=.1,.1

#cutmix=1

mosaic=1

#:104x104 54:52x52 85:26x26 104:13x13 for 416

[convolutional]

batch\_normalize=1

filters=32

size=3

stride=1

pad=1

activation=mish

# Downsample

[convolutional]

batch\_normalize=1

filters=64

size=3

stride=2

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[route]

layers = -2

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=32

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=64

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[route]

layers = -1,-7

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

# Downsample

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=2

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[route]

layers = -2

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=64

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=64

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=64

size=1

stride=1

pad=1

activation=mish

[route]

layers = -1,-10

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

# Downsample

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=2

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[route]

layers = -2

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=128

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=mish

[route]

layers = -1,-28

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

# Downsample

[convolutional]

batch\_normalize=1

filters=512

size=3

stride=2

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[route]

layers = -2

[convolutional]

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filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=256

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=mish

[route]

layers = -1,-28

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

# Downsample

[convolutional]

batch\_normalize=1

filters=1024

size=3

stride=2

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[route]

layers = -2

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=512

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=512

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=512

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[convolutional]

batch\_normalize=1

filters=512

size=3

stride=1

pad=1

activation=mish

[shortcut]

from=-3

activation=linear

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=mish

[route]

layers = -1,-16

[convolutional]

batch\_normalize=1

filters=1024

size=1

stride=1

pad=1

activation=mish

stopbackward=800

##########################

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=1024

activation=leaky

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

### SPP ###

[maxpool]

stride=1

size=5

[route]

layers=-2

[maxpool]

stride=1

size=9

[route]

layers=-4

[maxpool]

stride=1

size=13

[route]

layers=-1,-3,-5,-6

### End SPP ###

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=1024

activation=leaky

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[upsample]

stride=2

[route]

layers = 85

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[route]

layers = -1, -3

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=512

activation=leaky

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=512

activation=leaky

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=leaky

[upsample]

stride=2

[route]

layers = 54

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=leaky

[route]

layers = -1, -3

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=256

activation=leaky

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=256

activation=leaky

[convolutional]

batch\_normalize=1

filters=128

size=1

stride=1

pad=1

activation=leaky

##########################

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=256

activation=leaky

[convolutional]

size=1

stride=1

pad=1

filters=18

activation=linear

[yolo]

mask = 0,1,2

anchors = 12, 16, 19, 36, 40, 28, 36, 75, 76, 55, 72, 146, 142, 110, 192, 243, 459, 401

classes=1

num=9

jitter=.3

ignore\_thresh = .7

truth\_thresh = 1

scale\_x\_y = 1.2

iou\_thresh=0.213

cls\_normalizer=1.0

iou\_normalizer=0.07

iou\_loss=ciou

nms\_kind=greedynms

beta\_nms=0.6

max\_delta=5

[route]

layers = -4

[convolutional]

batch\_normalize=1

size=3

stride=2

pad=1

filters=256

activation=leaky

[route]

layers = -1, -16

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=512

activation=leaky

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=512

activation=leaky

[convolutional]

batch\_normalize=1

filters=256

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=512

activation=leaky

[convolutional]

size=1

stride=1

pad=1

filters=18

activation=linear

[yolo]

mask = 3,4,5

anchors = 12, 16, 19, 36, 40, 28, 36, 75, 76, 55, 72, 146, 142, 110, 192, 243, 459, 401

classes=1

num=9

jitter=.3

ignore\_thresh = .7

truth\_thresh = 1

scale\_x\_y = 1.1

iou\_thresh=0.213

cls\_normalizer=1.0

iou\_normalizer=0.07

iou\_loss=ciou

nms\_kind=greedynms

beta\_nms=0.6

max\_delta=5

[route]

layers = -4

[convolutional]

batch\_normalize=1

size=3

stride=2

pad=1

filters=512

activation=leaky

[route]

layers = -1, -37

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=1024

activation=leaky

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=1024

activation=leaky

[convolutional]

batch\_normalize=1

filters=512

size=1

stride=1

pad=1

activation=leaky

[convolutional]

batch\_normalize=1

size=3

stride=1

pad=1

filters=1024

activation=leaky

[convolutional]

size=1

stride=1

pad=1

filters=18

activation=linear

[yolo]

mask = 6,7,8

anchors = 12, 16, 19, 36, 40, 28, 36, 75, 76, 55, 72, 146, 142, 110, 192, 243, 459, 401

classes=1

num=9

jitter=.3

ignore\_thresh = .7

truth\_thresh = 1

random=1

scale\_x\_y = 1.05

iou\_thresh=0.213

cls\_normalizer=1.0

iou\_normalizer=0.07

iou\_loss=ciou

nms\_kind=greedynms

beta\_nms=0.6

max\_delta=5