name: "MobileNet-SSD"

input: "data"

input\_shape {

dim: 1

dim: 3

dim: 300

dim: 300

}

layer {

name: "conv0"

type: "Convolution"

bottom: "data"

top: "conv0"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 32

pad: 1

kernel\_size: 3

stride: 2

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv0/relu"

type: "ReLU"

bottom: "conv0"

top: "conv0"

}

layer {

name: "conv1/dw"

type: "Convolution"

bottom: "conv0"

top: "conv1/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 32

pad: 1

kernel\_size: 3

group: 32

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv1/dw/relu"

type: "ReLU"

bottom: "conv1/dw"

top: "conv1/dw"

}

layer {

name: "conv1"

type: "Convolution"

bottom: "conv1/dw"

top: "conv1"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 64

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv1/relu"

type: "ReLU"

bottom: "conv1"

top: "conv1"

}

layer {

name: "conv2/dw"

type: "Convolution"

bottom: "conv1"

top: "conv2/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 64

pad: 1

kernel\_size: 3

stride: 2

group: 64

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv2/dw/relu"

type: "ReLU"

bottom: "conv2/dw"

top: "conv2/dw"

}

layer {

name: "conv2"

type: "Convolution"

bottom: "conv2/dw"

top: "conv2"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv2/relu"

type: "ReLU"

bottom: "conv2"

top: "conv2"

}

layer {

name: "conv3/dw"

type: "Convolution"

bottom: "conv2"

top: "conv3/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

pad: 1

kernel\_size: 3

group: 128

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv3/dw/relu"

type: "ReLU"

bottom: "conv3/dw"

top: "conv3/dw"

}

layer {

name: "conv3"

type: "Convolution"

bottom: "conv3/dw"

top: "conv3"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv3/relu"

type: "ReLU"

bottom: "conv3"

top: "conv3"

}

layer {

name: "conv4/dw"

type: "Convolution"

bottom: "conv3"

top: "conv4/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

pad: 1

kernel\_size: 3

stride: 2

group: 128

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv4/dw/relu"

type: "ReLU"

bottom: "conv4/dw"

top: "conv4/dw"

}

layer {

name: "conv4"

type: "Convolution"

bottom: "conv4/dw"

top: "conv4"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv4/relu"

type: "ReLU"

bottom: "conv4"

top: "conv4"

}

layer {

name: "conv5/dw"

type: "Convolution"

bottom: "conv4"

top: "conv5/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

pad: 1

kernel\_size: 3

group: 256

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv5/dw/relu"

type: "ReLU"

bottom: "conv5/dw"

top: "conv5/dw"

}

layer {

name: "conv5"

type: "Convolution"

bottom: "conv5/dw"

top: "conv5"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv5/relu"

type: "ReLU"

bottom: "conv5"

top: "conv5"

}

layer {

name: "conv6/dw"

type: "Convolution"

bottom: "conv5"

top: "conv6/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

pad: 1

kernel\_size: 3

stride: 2

group: 256

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv6/dw/relu"

type: "ReLU"

bottom: "conv6/dw"

top: "conv6/dw"

}

layer {

name: "conv6"

type: "Convolution"

bottom: "conv6/dw"

top: "conv6"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv6/relu"

type: "ReLU"

bottom: "conv6"

top: "conv6"

}

layer {

name: "conv7/dw"

type: "Convolution"

bottom: "conv6"

top: "conv7/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

group: 512

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv7/dw/relu"

type: "ReLU"

bottom: "conv7/dw"

top: "conv7/dw"

}

layer {

name: "conv7"

type: "Convolution"

bottom: "conv7/dw"

top: "conv7"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv7/relu"

type: "ReLU"

bottom: "conv7"

top: "conv7"

}

layer {

name: "conv8/dw"

type: "Convolution"

bottom: "conv7"

top: "conv8/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

group: 512

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv8/dw/relu"

type: "ReLU"

bottom: "conv8/dw"

top: "conv8/dw"

}

layer {

name: "conv8"

type: "Convolution"

bottom: "conv8/dw"

top: "conv8"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv8/relu"

type: "ReLU"

bottom: "conv8"

top: "conv8"

}

layer {

name: "conv9/dw"

type: "Convolution"

bottom: "conv8"

top: "conv9/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

group: 512

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv9/dw/relu"

type: "ReLU"

bottom: "conv9/dw"

top: "conv9/dw"

}

layer {

name: "conv9"

type: "Convolution"

bottom: "conv9/dw"

top: "conv9"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv9/relu"

type: "ReLU"

bottom: "conv9"

top: "conv9"

}

layer {

name: "conv10/dw"

type: "Convolution"

bottom: "conv9"

top: "conv10/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

group: 512

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv10/dw/relu"

type: "ReLU"

bottom: "conv10/dw"

top: "conv10/dw"

}

layer {

name: "conv10"

type: "Convolution"

bottom: "conv10/dw"

top: "conv10"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv10/relu"

type: "ReLU"

bottom: "conv10"

top: "conv10"

}

layer {

name: "conv11/dw"

type: "Convolution"

bottom: "conv10"

top: "conv11/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

group: 512

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv11/dw/relu"

type: "ReLU"

bottom: "conv11/dw"

top: "conv11/dw"

}

layer {

name: "conv11"

type: "Convolution"

bottom: "conv11/dw"

top: "conv11"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv11/relu"

type: "ReLU"

bottom: "conv11"

top: "conv11"

}

layer {

name: "conv12/dw"

type: "Convolution"

bottom: "conv11"

top: "conv12/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

stride: 2

group: 512

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv12/dw/relu"

type: "ReLU"

bottom: "conv12/dw"

top: "conv12/dw"

}

layer {

name: "conv12"

type: "Convolution"

bottom: "conv12/dw"

top: "conv12"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 1024

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv12/relu"

type: "ReLU"

bottom: "conv12"

top: "conv12"

}

layer {

name: "conv13/dw"

type: "Convolution"

bottom: "conv12"

top: "conv13/dw"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 1024

pad: 1

kernel\_size: 3

group: 1024

engine: CAFFE

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv13/dw/relu"

type: "ReLU"

bottom: "conv13/dw"

top: "conv13/dw"

}

layer {

name: "conv13"

type: "Convolution"

bottom: "conv13/dw"

top: "conv13"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 1024

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv13/relu"

type: "ReLU"

bottom: "conv13"

top: "conv13"

}

layer {

name: "conv14\_1"

type: "Convolution"

bottom: "conv13"

top: "conv14\_1"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv14\_1/relu"

type: "ReLU"

bottom: "conv14\_1"

top: "conv14\_1"

}

layer {

name: "conv14\_2"

type: "Convolution"

bottom: "conv14\_1"

top: "conv14\_2"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 512

pad: 1

kernel\_size: 3

stride: 2

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv14\_2/relu"

type: "ReLU"

bottom: "conv14\_2"

top: "conv14\_2"

}

layer {

name: "conv15\_1"

type: "Convolution"

bottom: "conv14\_2"

top: "conv15\_1"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv15\_1/relu"

type: "ReLU"

bottom: "conv15\_1"

top: "conv15\_1"

}

layer {

name: "conv15\_2"

type: "Convolution"

bottom: "conv15\_1"

top: "conv15\_2"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

pad: 1

kernel\_size: 3

stride: 2

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv15\_2/relu"

type: "ReLU"

bottom: "conv15\_2"

top: "conv15\_2"

}

layer {

name: "conv16\_1"

type: "Convolution"

bottom: "conv15\_2"

top: "conv16\_1"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv16\_1/relu"

type: "ReLU"

bottom: "conv16\_1"

top: "conv16\_1"

}

layer {

name: "conv16\_2"

type: "Convolution"

bottom: "conv16\_1"

top: "conv16\_2"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 256

pad: 1

kernel\_size: 3

stride: 2

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv16\_2/relu"

type: "ReLU"

bottom: "conv16\_2"

top: "conv16\_2"

}

layer {

name: "conv17\_1"

type: "Convolution"

bottom: "conv16\_2"

top: "conv17\_1"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 64

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv17\_1/relu"

type: "ReLU"

bottom: "conv17\_1"

top: "conv17\_1"

}

layer {

name: "conv17\_2"

type: "Convolution"

bottom: "conv17\_1"

top: "conv17\_2"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 128

pad: 1

kernel\_size: 3

stride: 2

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv17\_2/relu"

type: "ReLU"

bottom: "conv17\_2"

top: "conv17\_2"

}

layer {

name: "conv11\_mbox\_loc"

type: "Convolution"

bottom: "conv11"

top: "conv11\_mbox\_loc"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 12

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv11\_mbox\_loc\_perm"

type: "Permute"

bottom: "conv11\_mbox\_loc"

top: "conv11\_mbox\_loc\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv11\_mbox\_loc\_flat"

type: "Flatten"

bottom: "conv11\_mbox\_loc\_perm"

top: "conv11\_mbox\_loc\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv11\_mbox\_conf"

type: "Convolution"

bottom: "conv11"

top: "conv11\_mbox\_conf"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 63

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv11\_mbox\_conf\_perm"

type: "Permute"

bottom: "conv11\_mbox\_conf"

top: "conv11\_mbox\_conf\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv11\_mbox\_conf\_flat"

type: "Flatten"

bottom: "conv11\_mbox\_conf\_perm"

top: "conv11\_mbox\_conf\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv11\_mbox\_priorbox"

type: "PriorBox"

bottom: "conv11"

bottom: "data"

top: "conv11\_mbox\_priorbox"

prior\_box\_param {

min\_size: 60.0

aspect\_ratio: 2.0

flip: true

clip: false

variance: 0.1

variance: 0.1

variance: 0.2

variance: 0.2

offset: 0.5

}

}

layer {

name: "conv13\_mbox\_loc"

type: "Convolution"

bottom: "conv13"

top: "conv13\_mbox\_loc"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 24

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv13\_mbox\_loc\_perm"

type: "Permute"

bottom: "conv13\_mbox\_loc"

top: "conv13\_mbox\_loc\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv13\_mbox\_loc\_flat"

type: "Flatten"

bottom: "conv13\_mbox\_loc\_perm"

top: "conv13\_mbox\_loc\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv13\_mbox\_conf"

type: "Convolution"

bottom: "conv13"

top: "conv13\_mbox\_conf"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 126

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv13\_mbox\_conf\_perm"

type: "Permute"

bottom: "conv13\_mbox\_conf"

top: "conv13\_mbox\_conf\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv13\_mbox\_conf\_flat"

type: "Flatten"

bottom: "conv13\_mbox\_conf\_perm"

top: "conv13\_mbox\_conf\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv13\_mbox\_priorbox"

type: "PriorBox"

bottom: "conv13"

bottom: "data"

top: "conv13\_mbox\_priorbox"

prior\_box\_param {

min\_size: 105.0

max\_size: 150.0

aspect\_ratio: 2.0

aspect\_ratio: 3.0

flip: true

clip: false

variance: 0.1

variance: 0.1

variance: 0.2

variance: 0.2

offset: 0.5

}

}

layer {

name: "conv14\_2\_mbox\_loc"

type: "Convolution"

bottom: "conv14\_2"

top: "conv14\_2\_mbox\_loc"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 24

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv14\_2\_mbox\_loc\_perm"

type: "Permute"

bottom: "conv14\_2\_mbox\_loc"

top: "conv14\_2\_mbox\_loc\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv14\_2\_mbox\_loc\_flat"

type: "Flatten"

bottom: "conv14\_2\_mbox\_loc\_perm"

top: "conv14\_2\_mbox\_loc\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv14\_2\_mbox\_conf"

type: "Convolution"

bottom: "conv14\_2"

top: "conv14\_2\_mbox\_conf"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 126

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv14\_2\_mbox\_conf\_perm"

type: "Permute"

bottom: "conv14\_2\_mbox\_conf"

top: "conv14\_2\_mbox\_conf\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv14\_2\_mbox\_conf\_flat"

type: "Flatten"

bottom: "conv14\_2\_mbox\_conf\_perm"

top: "conv14\_2\_mbox\_conf\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv14\_2\_mbox\_priorbox"

type: "PriorBox"

bottom: "conv14\_2"

bottom: "data"

top: "conv14\_2\_mbox\_priorbox"

prior\_box\_param {

min\_size: 150.0

max\_size: 195.0

aspect\_ratio: 2.0

aspect\_ratio: 3.0

flip: true

clip: false

variance: 0.1

variance: 0.1

variance: 0.2

variance: 0.2

offset: 0.5

}

}

layer {

name: "conv15\_2\_mbox\_loc"

type: "Convolution"

bottom: "conv15\_2"

top: "conv15\_2\_mbox\_loc"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 24

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv15\_2\_mbox\_loc\_perm"

type: "Permute"

bottom: "conv15\_2\_mbox\_loc"

top: "conv15\_2\_mbox\_loc\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv15\_2\_mbox\_loc\_flat"

type: "Flatten"

bottom: "conv15\_2\_mbox\_loc\_perm"

top: "conv15\_2\_mbox\_loc\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv15\_2\_mbox\_conf"

type: "Convolution"

bottom: "conv15\_2"

top: "conv15\_2\_mbox\_conf"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 126

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv15\_2\_mbox\_conf\_perm"

type: "Permute"

bottom: "conv15\_2\_mbox\_conf"

top: "conv15\_2\_mbox\_conf\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv15\_2\_mbox\_conf\_flat"

type: "Flatten"

bottom: "conv15\_2\_mbox\_conf\_perm"

top: "conv15\_2\_mbox\_conf\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv15\_2\_mbox\_priorbox"

type: "PriorBox"

bottom: "conv15\_2"

bottom: "data"

top: "conv15\_2\_mbox\_priorbox"

prior\_box\_param {

min\_size: 195.0

max\_size: 240.0

aspect\_ratio: 2.0

aspect\_ratio: 3.0

flip: true

clip: false

variance: 0.1

variance: 0.1

variance: 0.2

variance: 0.2

offset: 0.5

}

}

layer {

name: "conv16\_2\_mbox\_loc"

type: "Convolution"

bottom: "conv16\_2"

top: "conv16\_2\_mbox\_loc"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 24

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv16\_2\_mbox\_loc\_perm"

type: "Permute"

bottom: "conv16\_2\_mbox\_loc"

top: "conv16\_2\_mbox\_loc\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv16\_2\_mbox\_loc\_flat"

type: "Flatten"

bottom: "conv16\_2\_mbox\_loc\_perm"

top: "conv16\_2\_mbox\_loc\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv16\_2\_mbox\_conf"

type: "Convolution"

bottom: "conv16\_2"

top: "conv16\_2\_mbox\_conf"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 126

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv16\_2\_mbox\_conf\_perm"

type: "Permute"

bottom: "conv16\_2\_mbox\_conf"

top: "conv16\_2\_mbox\_conf\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv16\_2\_mbox\_conf\_flat"

type: "Flatten"

bottom: "conv16\_2\_mbox\_conf\_perm"

top: "conv16\_2\_mbox\_conf\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv16\_2\_mbox\_priorbox"

type: "PriorBox"

bottom: "conv16\_2"

bottom: "data"

top: "conv16\_2\_mbox\_priorbox"

prior\_box\_param {

min\_size: 240.0

max\_size: 285.0

aspect\_ratio: 2.0

aspect\_ratio: 3.0

flip: true

clip: false

variance: 0.1

variance: 0.1

variance: 0.2

variance: 0.2

offset: 0.5

}

}

layer {

name: "conv17\_2\_mbox\_loc"

type: "Convolution"

bottom: "conv17\_2"

top: "conv17\_2\_mbox\_loc"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 24

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv17\_2\_mbox\_loc\_perm"

type: "Permute"

bottom: "conv17\_2\_mbox\_loc"

top: "conv17\_2\_mbox\_loc\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv17\_2\_mbox\_loc\_flat"

type: "Flatten"

bottom: "conv17\_2\_mbox\_loc\_perm"

top: "conv17\_2\_mbox\_loc\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv17\_2\_mbox\_conf"

type: "Convolution"

bottom: "conv17\_2"

top: "conv17\_2\_mbox\_conf"

param {

lr\_mult: 1.0

decay\_mult: 1.0

}

param {

lr\_mult: 2.0

decay\_mult: 0.0

}

convolution\_param {

num\_output: 126

kernel\_size: 1

weight\_filler {

type: "msra"

}

bias\_filler {

type: "constant"

value: 0.0

}

}

}

layer {

name: "conv17\_2\_mbox\_conf\_perm"

type: "Permute"

bottom: "conv17\_2\_mbox\_conf"

top: "conv17\_2\_mbox\_conf\_perm"

permute\_param {

order: 0

order: 2

order: 3

order: 1

}

}

layer {

name: "conv17\_2\_mbox\_conf\_flat"

type: "Flatten"

bottom: "conv17\_2\_mbox\_conf\_perm"

top: "conv17\_2\_mbox\_conf\_flat"

flatten\_param {

axis: 1

}

}

layer {

name: "conv17\_2\_mbox\_priorbox"

type: "PriorBox"

bottom: "conv17\_2"

bottom: "data"

top: "conv17\_2\_mbox\_priorbox"

prior\_box\_param {

min\_size: 285.0

max\_size: 300.0

aspect\_ratio: 2.0

aspect\_ratio: 3.0

flip: true

clip: false

variance: 0.1

variance: 0.1

variance: 0.2

variance: 0.2

offset: 0.5

}

}

layer {

name: "mbox\_loc"

type: "Concat"

bottom: "conv11\_mbox\_loc\_flat"

bottom: "conv13\_mbox\_loc\_flat"

bottom: "conv14\_2\_mbox\_loc\_flat"

bottom: "conv15\_2\_mbox\_loc\_flat"

bottom: "conv16\_2\_mbox\_loc\_flat"

bottom: "conv17\_2\_mbox\_loc\_flat"

top: "mbox\_loc"

concat\_param {

axis: 1

}

}

layer {

name: "mbox\_conf"

type: "Concat"

bottom: "conv11\_mbox\_conf\_flat"

bottom: "conv13\_mbox\_conf\_flat"

bottom: "conv14\_2\_mbox\_conf\_flat"

bottom: "conv15\_2\_mbox\_conf\_flat"

bottom: "conv16\_2\_mbox\_conf\_flat"

bottom: "conv17\_2\_mbox\_conf\_flat"

top: "mbox\_conf"

concat\_param {

axis: 1

}

}

layer {

name: "mbox\_priorbox"

type: "Concat"

bottom: "conv11\_mbox\_priorbox"

bottom: "conv13\_mbox\_priorbox"

bottom: "conv14\_2\_mbox\_priorbox"

bottom: "conv15\_2\_mbox\_priorbox"

bottom: "conv16\_2\_mbox\_priorbox"

bottom: "conv17\_2\_mbox\_priorbox"

top: "mbox\_priorbox"

concat\_param {

axis: 2

}

}

layer {

name: "mbox\_conf\_reshape"

type: "Reshape"

bottom: "mbox\_conf"

top: "mbox\_conf\_reshape"

reshape\_param {

shape {

dim: 0

dim: -1

dim: 21

}

}

}

layer {

name: "mbox\_conf\_softmax"

type: "Softmax"

bottom: "mbox\_conf\_reshape"

top: "mbox\_conf\_softmax"

softmax\_param {

axis: 2

}

}

layer {

name: "mbox\_conf\_flatten"

type: "Flatten"

bottom: "mbox\_conf\_softmax"

top: "mbox\_conf\_flatten"

flatten\_param {

axis: 1

}

}

layer {

name: "detection\_out"

type: "DetectionOutput"

bottom: "mbox\_loc"

bottom: "mbox\_conf\_flatten"

bottom: "mbox\_priorbox"

top: "detection\_out"

include {

phase: TEST

}

detection\_output\_param {

num\_classes: 21

share\_location: true

background\_label\_id: 0

nms\_param {

nms\_threshold: 0.45

top\_k: 100

}

code\_type: CENTER\_SIZE

keep\_top\_k: 100

confidence\_threshold: 0.25

}

}