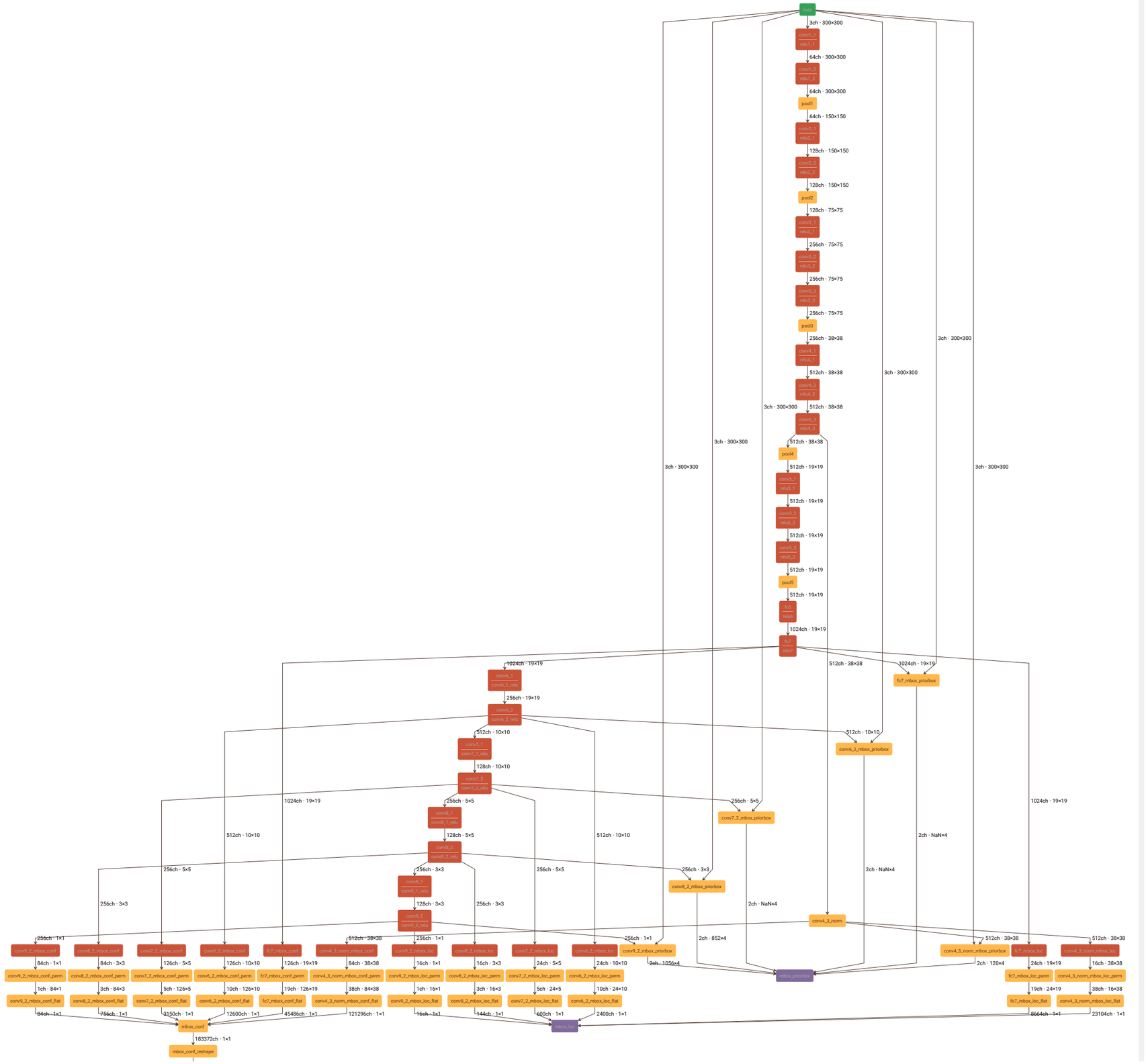
```
name: "VGG_VOC0712_SSD_300x300_deploy"
input: "data"
input_shape {
  dim: 1
  dim: 3
  dim: 300
  dim: 300
}
layer {
  name: "conv1_1"
  type: "Convolution"
  bottom: "data"
  top: "conv1_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 64
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu1_1"
  type: "ReLU"
  bottom: "conv1_1"
  top: "conv1_1"
}
layer {
  name: "conv1_2"
  type: "Convolution"
  bottom: "conv1_1"
  top: "conv1_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 64
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu1_2"
  type: "ReLU"
  bottom: "conv1_2"
  top: "conv1_2"
}
layer {
  name: "pool1"
  type: "Pooling"
  bottom: "conv1_2"
  top: "pool1"
  pooling_param {
    pool: MAX
    kernel_size: 2
    stride: 2
  }
}
layer {
  name: "conv2_1"
  type: "Convolution"
  bottom: "pool1"
  top: "conv2_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 128
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu2_1"
  type: "ReLU"
  bottom: "conv2_1"
  top: "conv2_1"
}
layer {
  name: "conv2_2"
  type: "Convolution"
  bottom: "conv2_1"
  top: "conv2_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 128
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu2_2"
  type: "ReLU"
  bottom: "conv2_2"
  top: "conv2_2"
}
layer {
  name: "pool2"
  type: "Pooling"
  bottom: "conv2_2"
  top: "pool2"
  pooling_param {
    pool: MAX
    kernel_size: 2
    stride: 2
  }
}
layer {
  name: "conv3_1"
  type: "Convolution"
  bottom: "pool2"
  top: "conv3_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu3_1"
  type: "ReLU"
  bottom: "conv3_1"
  top: "conv3_1"
}
layer {
  name: "conv3_2"
  type: "Convolution"
  bottom: "conv3_1"
  top: "conv3_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
```

Error Encountered

CONCAT: input dimensions dont agree!



```
  name: "relu3_2"
  type: "ReLU"
  bottom: "conv3_2"
  top: "conv3_2"
}
layer {
  name: "conv3_3"
  type: "Convolution"
  bottom: "conv3_2"
  top: "conv3_3"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu3_3"
  type: "ReLU"
  bottom: "conv3_3"
  top: "conv3_3"
}
layer {
  name: "pool3"
  type: "Pooling"
  bottom: "conv3_3"
  top: "pool3"
  pooling_param {
    pool: MAX
    kernel_size: 2
    stride: 2
  }
}
layer {
  name: "conv4_1"
  type: "Convolution"
  bottom: "pool3"
  top: "conv4_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu4_1"
  type: "ReLU"
  bottom: "conv4_1"
  top: "conv4_1"
}
layer {
  name: "conv4_2"
  type: "Convolution"
  bottom: "conv4_1"
  top: "conv4_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu4_2"
  type: "ReLU"
  bottom: "conv4_2"
  top: "conv4_2"
}
layer {
  name: "conv4_3"
  type: "Convolution"
  bottom: "conv4_2"
  top: "conv4_3"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu4_3"
  type: "ReLU"
  bottom: "conv4_3"
  top: "conv4_3"
}
layer {
  name: "pool4"
  type: "Pooling"
  bottom: "conv4_3"
  top: "pool4"
  pooling_param {
    pool: MAX
    kernel_size: 2
    stride: 2
  }
}
layer {
  name: "conv5_1"
  type: "Convolution"
  bottom: "pool4"
  top: "conv5_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
    dilation: 1
  }
}
layer {
  name: "relu5_1"
  type: "ReLU"
  bottom: "conv5_1"
  top: "conv5_1"
}
layer {
  name: "conv5_2"
  type: "Convolution"
  bottom: "conv5_1"
  top: "conv5_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
    dilation: 1
  }
}
layer {
  name: "relu5_2"
```

Network Analysis

Summary:

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops	mem
1	data	data		3	300x300	3	300x300		**activation** 270k
2	conv1_1	Convolution		3	300x300	64	300x300	**macc** 155.52M	**activation** 5.76M **param** 1.79k
3	relu1_1	ReLU		64	300x300	64	300x300	**comp** 5.76M	**activation** 5.76M
4	conv1_2	Convolution		64	300x300	64	300x300	**macc** 3.32G	**activation** 5.76M **param** 36.93k
5	relu1_2	ReLU		64	300x300	64	300x300	**comp** 5.76M	**activation** 5.76M
6	pool1	Pooling		64	300x300	64	150x150	**comp** 5.76M	**activation** 1.44M
7	conv2_1	Convolution		64	150x150	128	150x150	**macc** 1.66G	**activation** 2.88M **param** 73.86k
8	relu2_1	ReLU		128	150x150	128	150x150	**comp** 2.88M	**activation** 2.88M
9	conv2_2	Convolution		128	150x150	128	150x150	**macc** 3.32G	**activation** 2.88M **param** 147.58k
10	relu2_2	ReLU		128	150x150	128	150x150	**comp** 2.88M	**activation** 2.88M
11	pool2	Pooling		128	150x150	128	75x75	**comp** 2.88M	**activation** 720k
12	conv3_1	Convolution		128	75x75	256	75x75	**macc** 1.66G	**activation** 1.44M **param** 295.17k
13	relu3_1	ReLU		256	75x75	256	75x75	**comp** 1.44M	**activation** 1.44M
14	conv3_2	Convolution		256	75x75	256	75x75	**macc** 3.32G	**activation** 1.44M **param** 590.08k
15	relu3_2	ReLU		256	75x75	256	75x75	**comp** 1.44M	**activation** 1.44M
16	conv3_3	Convolution		256	75x75	256	75x75	**macc** 3.32G	**activation** 1.44M **param** 590.08k
17	relu3_3	ReLU		256	75x75	256	75x75	**comp** 1.44M	**activation** 1.44M
18	pool3	Pooling		256	75x75	256	38x38	**comp** 1.48M	**activation** 369.66k
19	conv4_1	Convolution		256	38x38	512	38x38	**macc** 1.7G	**activation** 739.33k **param** 1.18M
20	relu4_1	ReLU		512	38x38	512	38x38	**comp** 739.33k	**activation** 739.33k
21	conv4_2	Convolution		512	38x38	512	38x38	**macc** 3.41G	**activation** 739.33k **param** 2.36M
22	relu4_2	ReLU		512	38x38	512	38x38	**comp** 739.33k	**activation** 739.33k
23	conv4_3	Convolution		512	38x38	512	38x38	**macc** 3.41G	**activation** 739.33k **param** 2.36M
24	relu4_3	ReLU		512	38x38	512	38x38	**comp** 739.33k	**activation** 739.33k
25	conv4_3_norm	Normalize		512	38x38	512	38x38	**add** 739.33k **div** 1.48M **exp** 739.33k	**param** 2
26	conv4_3_norm_mbox_priorbox	PriorBox		512	38x38	2	120x4		
27	conv4_3_norm_mbox_conf	Convolution		512	38x38	84	38x38	**macc** 558.93M	**activation** 121.3k **param** 387.16k
28	conv4_3_norm_mbox_conf_perm	Permute		84	38x38	38	84x38		
29	conv4_3_norm_mbox_conf_flat	Flatten		38	84x38	121296	1x1		**activation** 121.3k
30	conv4_3_norm_mbox_loc	Convolution		512	38x38	16	38x38	**macc** 106.46M	**activation** 23.1k **param** 73.74k
31	conv4_3_norm_mbox_loc_perm	Permute		16	38x38	38	16x38		
32	conv4_3_norm_mbox_loc_flat	Flatten		38	16x38	23104	1x1		**activation** 23.1k
33	pool4	Pooling		512	38x38	512	19x19	**comp** 739.33k	**activation** 184.83k
34	conv5_1	Convolution		512	19x19	512	19x19	**macc** 851.71M	**activation** 184.83k **param** 2.36M
35	relu5_1	ReLU		512	19x19	512	19x19	**comp** 184.83k	**activation** 184.83k
36	conv5_2	Convolution		512	19x19	512	19x19	**macc** 851.71M	**activation** 184.83k **param** 2.36M
37	relu5_2	ReLU		512	19x19	512	19x19	**comp** 184.83k	**activation** 184.83k
38	conv5_3	Convolution		512	19x19	512	19x19	**macc** 851.71M	**activation** 184.83k **param** 2.36M
39	relu5_3	ReLU		512	19x19	512	19x19	**comp** 184.83k	**activation** 184.83k
40	pool5	Pooling		512	19x19	512	19x19	**comp** 1.66M	**activation** 184.83k
41	fc6	Convolution		512	19x19	1024	19x19	**macc** 1.7G	**activation** 369.66k **param** 4.72M
42	relu6	ReLU		1024	19x19	1024	19x19	**comp** 369.66k	**activation** 369.66k
43	fc7	Convolution		1024	19x19	1024	19x19	**macc** 378.54M	**activation** 369.66k **param** 1.05M
44	relu7	ReLU		1024	19x19	1024	19x19	**comp** 369.66k	**activation** 369.66k
45	fc7_mbox_priorbox	PriorBox		3	300x300	2	NaNx4		
46	fc7_mbox_conf	Convolution		1024	19x19	126	19x19	**macc** 419.2M	**activation** 45.49k **param** 1.16M
47	fc7_mbox_conf_perm	Permute		126	19x19	19	126x19		
48	fc7_mbox_conf_flat	Flatten		19	126x19	45486	1x1		**activation** 45.49k
49	fc7_mbox_loc	Convolution		1024	19x19	24	19x19	**macc** 79.85M	**activation** 8.66k **param** 221.21k
50	fc7_mbox_loc_perm	Permute		24	19x19	19	24x19		
51	fc7_mbox_loc_flat	Flatten		19	24x19	8664	1x1		**activation** 8.66k
52	conv6_1	Convolution		1024	19x19	256	19x19	**macc** 94.63M	**activation** 92.42k **param** 262.4k
53	conv6_1_relu	ReLU		256	19x19	256	19x19	**comp** 92.42k	**activation** 92.42k
54	conv6_2	Convolution		256	19x19	512	10x10	**macc** 117.96M	**activation** 51.2k **param** 1.18M
55	conv6_2_relu	ReLU		512	10x10	512	10x10	**comp** 51.2k	**activation** 51.2k
56	conv6_2_mbox_priorbox	PriorBox		3	300x300	2	NaNx4		
57	conv6_2_mbox_conf	Convolution		512	10x10	126	10x10	**macc** 58.06M	**activation** 12.6k

```
  type: "ReLU"
  bottom: "conv5_2"
  top: "conv5_2"
}
layer {
  name: "conv5_3"
  type: "Convolution"
  bottom: "conv5_2"
  top: "conv5_3"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
    dilation: 1
  }
}
layer {
  name: "relu5_3"
  type: "ReLU"
  bottom: "conv5_3"
  top: "conv5_3"
}
layer {
  name: "pool5"
  type: "Pooling"
  bottom: "conv5_3"
  top: "pool5"
  pooling_param {
    pool: MAX
    kernel_size: 3
    stride: 1
    pad: 1
  }
}
layer {
  name: "fc6"
  type: "Convolution"
  bottom: "pool5"
  top: "fc6"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 1024
    pad: 6
    kernel_size: 3
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
    dilation: 6
  }
}
layer {
  name: "relu6"
  type: "ReLU"
  bottom: "fc6"
  top: "fc6"
}
layer {
  name: "fc7"
  type: "Convolution"
  bottom: "fc6"
  top: "fc7"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 1024
    kernel_size: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "relu7"
  type: "ReLU"
  bottom: "fc7"
  top: "fc7"
}
layer {
  name: "conv6_1"
  type: "Convolution"
  bottom: "fc7"
  top: "conv6_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 0
    kernel_size: 1
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv6_1_relu"
  type: "ReLU"
  bottom: "conv6_1"
  top: "conv6_1"
}
layer {
  name: "conv6_2"
  type: "Convolution"
  bottom: "conv6_1"
  top: "conv6_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 512
    pad: 1
    kernel_size: 3
    stride: 2
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv6_2_relu"
  type: "ReLU"
  bottom: "conv6_2"
  top: "conv6_2"
}
layer {
  name: "conv7_1"
  type: "Convolution"
  bottom: "conv6_2"
  top: "conv7_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 128
    pad: 0
    kernel_size: 1
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv7_1_relu"
  type: "ReLU"
  bottom: "conv7_1"
  top: "conv7_1"
}
layer {
  name: "conv7_2"
  type: "Convolution"
  bottom: "conv7_1"
  top: "conv7_2"
```

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops_raw	mem_raw
									param 580.73k
58	conv6_2_mbox_conf_perm	Permute		126	10x10	10	126x10		
59	conv6_2_mbox_conf_flat	Flatten		10	126x10	12600	1x1		**activation** 12.6k
60	conv6_2_mbox_loc	Convolution		512	10x10	24	10x10	**macc** 11.06M	**activation** 2.4k **param** 110.62k
61	conv6_2_mbox_loc_perm	Permute		24	10x10	10	24x10		
62	conv6_2_mbox_loc_flat	Flatten		10	24x10	2400	1x1		**activation** 2.4k
63	conv7_1	Convolution		512	10x10	128	10x10	**macc** 6.55M	**activation** 12.8k **param** 65.66k
64	conv7_1_relu	ReLU		128	10x10	128	10x10	**comp** 12.8k	**activation** 12.8k
65	conv7_2	Convolution		128	10x10	256	5x5	**macc** 7.37M	**activation** 6.4k **param** 295.17k
66	conv7_2_relu	ReLU		256	5x5	256	5x5	**comp** 6.4k	**activation** 6.4k
67	conv7_2_mbox_priorbox	PriorBox		3	300x300	2	NaNx4		
68	conv7_2_mbox_conf	Convolution		256	5x5	126	5x5	**macc** 7.26M	**activation** 3.15k **param** 290.43k
69	conv7_2_mbox_conf_perm	Permute		126	5x5	5	126x5		
70	conv7_2_mbox_conf_flat	Flatten		5	126x5	3150	1x1		**activation** 3.15k
71	conv7_2_mbox_loc	Convolution		256	5x5	24	5x5	**macc** 1.38M	**activation** 600 **param** 55.32k
72	conv7_2_mbox_loc_perm	Permute		24	5x5	5	24x5		
73	conv7_2_mbox_loc_flat	Flatten		5	24x5	600	1x1		**activation** 600
74	conv8_1	Convolution		256	5x5	128	5x5	**macc** 819.2k	**activation** 3.2k **param** 32.9k
75	conv8_1_relu	ReLU		128	5x5	128	5x5	**comp** 3.2k	**activation** 3.2k
76	conv8_2	Convolution		128	5x5	256	3x3	**macc** 2.65M	**activation** 2.3k **param** 295.17k
77	conv8_2_relu	ReLU		256	3x3	256	3x3	**comp** 2.3k	**activation** 2.3k
78	conv8_2_mbox_priorbox	PriorBox		3	300x300	2	852x4		
79	conv8_2_mbox_conf	Convolution		256	3x3	84	3x3	**macc** 1.74M	**activation** 756 **param** 193.62k
80	conv8_2_mbox_conf_perm	Permute		84	3x3	3	84x3		
81	conv8_2_mbox_conf_flat	Flatten		3	84x3	756	1x1		**activation** 756
82	conv8_2_mbox_loc	Convolution		256	3x3	16	3x3	**macc** 331.78k	**activation** 144 **param** 36.88k
83	conv8_2_mbox_loc_perm	Permute		16	3x3	3	16x3		
84	conv8_2_mbox_loc_flat	Flatten		3	16x3	144	1x1		**activation** 144
85	conv9_1	Convolution		256	3x3	128	3x3	**macc** 294.91k	**activation** 1.15k **param** 32.9k
86	conv9_1_relu	ReLU		128	3x3	128	3x3	**comp** 1.15k	**activation** 1.15k
87	conv9_2	Convolution		128	3x3	256	1x1	**macc** 294.91k	**activation** 256 **param** 295.17k
88	conv9_2_relu	ReLU		256	1x1	256	1x1	**comp** 256	**activation** 256
89	conv9_2_mbox_priorbox	PriorBox		3	300x300	2	1056x4		
90	mbox_priorbox	Concat		12	120x4	12	120x4		**activation** 5.76k
91	conv9_2_mbox_conf	Convolution		256	1x1	84	1x1	**macc** 193.54k	**activation** 84 **param** 193.62k
92	conv9_2_mbox_conf_perm	Permute		84	1x1	1	84x1		
93	conv9_2_mbox_conf_flat	Flatten		1	84x1	84	1x1		**activation** 84
94	mbox_conf	Concat		183372	1x1	183372	1x1		**activation** 183.37k
95	mbox_conf_reshape	Reshape		183372	1x1	8732	1x21		
96	mbox_conf_softmax	Softmax		8732	1x21	8732	1x21	**add** 183.37k **div** 183.37k **exp** 183.37k	**activation** 183.37k
97	mbox_conf_flatten	Flatten		8732	1x21	183372	1x1		**activation** 183.37k
98	conv9_2_mbox_loc	Convolution		256	1x1	16	1x1	**macc** 36.86k	**activation** 16 **param** 36.88k
99	conv9_2_mbox_loc_perm	Permute		16	1x1	1	16x1		
100	conv9_2_mbox_loc_flat	Flatten		1	16x1	16	1x1		**activation** 16
101	mbox_loc	Concat		34928	1x1	34928	1x1		**activation** 34.93k
	TOTAL							**macc** 31.37G **comp** 37.8M **add** 922.7k **div** 1.66M **exp** 922.7k	**activation** 55.5M **param** 26.28M

Details:

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops_raw	mem_raw
1	data	data	1	3	300x300	3	300x300	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0	**activation** 270000 **param** 0
2	conv1_1	Convolution	1	3	300x300	64	300x300	**macc** 155520000 **comp** 0 **add** 0 **div** 0 **exp** 0	**activation** 5760000 **param** 1792
3	relu1_1	ReLU	1	64	300x300	64	300x300	**macc** 0 **comp** 5760000 **add** 0 **div** 0 **exp** 0	**activation** 5760000 **param** 0
4	conv1_2	Convolution	1	64	300x300	64	300x300	**macc** 3317760000 **comp** 0 **add** 0 **div** 0 **exp** 0	**activation** 5760000 **param** 36928
5	relu1_2	ReLU	1	64	300x300	64	300x300	**macc** 0 **comp** 5760000 **add** 0 **div** 0 **exp** 0	**activation** 5760000 **param** 0
6	pool1	Pooling	1	64	300x300	64	150x150	**macc** 0 **comp** 5760000 **add** 0 **div** 0	**activation** 1440000 **param** 0

```
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 1
    kernel_size: 3
    stride: 2
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv7_2_relu"
  type: "ReLU"
  bottom: "conv7_2"
  top: "conv7_2"
}
layer {
  name: "conv8_1"
  type: "Convolution"
  bottom: "conv7_2"
  top: "conv8_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 128
    pad: 0
    kernel_size: 1
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv8_1_relu"
  type: "ReLU"
  bottom: "conv8_1"
  top: "conv8_1"
}
layer {
  name: "conv8_2"
  type: "Convolution"
  bottom: "conv8_1"
  top: "conv8_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 0
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv8_2_relu"
  type: "ReLU"
  bottom: "conv8_2"
  top: "conv8_2"
}
layer {
  name: "conv9_1"
  type: "Convolution"
  bottom: "conv8_2"
  top: "conv9_1"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 128
    pad: 0
    kernel_size: 1
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv9_1_relu"
  type: "ReLU"
  bottom: "conv9_1"
  top: "conv9_1"
}
layer {
  name: "conv9_2"
  type: "Convolution"
  bottom: "conv9_1"
  top: "conv9_2"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 256
    pad: 0
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv9_2_relu"
  type: "ReLU"
  bottom: "conv9_2"
  top: "conv9_2"
}
layer {
  name: "conv4_3_norm"
  type: "Normalize"
  bottom: "conv4_3"
  top: "conv4_3_norm"
  norm_param {
    across_spatial: false
    scale_filler {
      type: "constant"
      value: 20
    }
    channel_shared: false
  }
}
layer {
  name: "conv4_3_norm_mbox_loc"
  type: "Convolution"
  bottom: "conv4_3_norm"
  top: "conv4_3_norm_mbox_loc"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 16
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv4_3_norm_mbox_loc_perm"
  type: "Permute"
  bottom: "conv4_3_norm_mbox_loc"
  top: "conv4_3_norm_mbox_loc_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv4_3_norm_mbox_loc_flat"
  type: "Flatten"
  bottom: "conv4_3_norm_mbox_loc_perm"
```

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	mem_rw
7	conv2_1	Convolution	1	64	150x150	128	150x150	**macc** 1658880000 **activation** 2880000 **comp** 0 **param** 73856 **add** 0 **div** 0 **exp** 0
8	relu2_1	ReLU	1	128	150x150	128	150x150	**macc** 0 **activation** 2880000 **comp** 2880000 **param** 0 **add** 0 **div** 0 **exp** 0
9	conv2_2	Convolution	1	128	150x150	128	150x150	**macc** 3317760000 **activation** 2880000 **comp** 0 **param** 147584 **add** 0 **div** 0 **exp** 0
10	relu2_2	ReLU	1	128	150x150	128	150x150	**macc** 0 **activation** 2880000 **comp** 2880000 **param** 0 **add** 0 **div** 0 **exp** 0
11	pool2	Pooling	1	128	150x150	128	75x75	**macc** 0 **activation** 720000 **comp** 2880000 **param** 0 **add** 0 **div** 0 **exp** 0
12	conv3_1	Convolution	1	128	75x75	256	75x75	**macc** 1658880000 **activation** 1440000 **comp** 0 **param** 295168 **add** 0 **div** 0 **exp** 0
13	relu3_1	ReLU	1	256	75x75	256	75x75	**macc** 0 **activation** 1440000 **comp** 1440000 **param** 0 **add** 0 **div** 0 **exp** 0
14	conv3_2	Convolution	1	256	75x75	256	75x75	**macc** 3317760000 **activation** 1440000 **comp** 0 **param** 590080 **add** 0 **div** 0 **exp** 0
15	relu3_2	ReLU	1	256	75x75	256	75x75	**macc** 0 **activation** 1440000 **comp** 1440000 **param** 0 **add** 0 **div** 0 **exp** 0
16	conv3_3	Convolution	1	256	75x75	256	75x75	**macc** 3317760000 **activation** 1440000 **comp** 0 **param** 590080 **add** 0 **div** 0 **exp** 0
17	relu3_3	ReLU	1	256	75x75	256	75x75	**macc** 0 **activation** 1440000 **comp** 1440000 **param** 0 **add** 0 **div** 0 **exp** 0
18	pool3	Pooling	1	256	75x75	256	38x38	**macc** 0 **activation** 369664 **comp** 1478656 **param** 0 **add** 0 **div** 0 **exp** 0
19	conv4_1	Convolution	1	256	38x38	512	38x38	**macc** 1703411712 **activation** 739328 **comp** 0 **param** 1180160 **add** 0 **div** 0 **exp** 0
20	relu4_1	ReLU	1	512	38x38	512	38x38	**macc** 0 **activation** 739328 **comp** 739328 **param** 0 **add** 0 **div** 0 **exp** 0
21	conv4_2	Convolution	1	512	38x38	512	38x38	**macc** 3406823424 **activation** 739328 **comp** 0 **param** 2359808 **add** 0 **div** 0 **exp** 0
22	relu4_2	ReLU	1	512	38x38	512	38x38	**macc** 0 **activation** 739328 **comp** 739328 **param** 0 **add** 0 **div** 0 **exp** 0
23	conv4_3	Convolution	1	512	38x38	512	38x38	**macc** 3406823424 **activation** 739328 **comp** 0 **param** 2359808 **add** 0 **div** 0 **exp** 0
24	relu4_3	ReLU	1	512	38x38	512	38x38	**macc** 0 **activation** 739328 **comp** 739328 **param** 0 **add** 0 **div** 0 **exp** 0
25	conv4_3_norm	Normalize	1	512	38x38	512	38x38	**macc** 739328 **activation** 739328 **comp** 0 **param** 2 **add** 739328 **div** 1478656 **exp** 739328
26	conv4_3_norm_mbox_priorbox	PriorBox	1	512	38x38	2	120x4	**macc** 0 **activation** 0 **comp** 0 **param** 0 **add** 0 **div** 0 **exp** 0
27	conv4_3_norm_mbox_conf	Convolution	1	512	38x38	84	38x38	**macc** 558931968 **activation** 121296 **comp** 0 **param** 387156 **add** 0 **div** 0

```
  top: "conv4_3_norm_mbox_loc_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv4_3_norm_mbox_conf"
  type: "Convolution"
  bottom: "conv4_3_norm"
  top: "conv4_3_norm_mbox_conf"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 84
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv4_3_norm_mbox_conf_perm"
  type: "Permute"
  bottom: "conv4_3_norm_mbox_conf"
  top: "conv4_3_norm_mbox_conf_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv4_3_norm_mbox_conf_flat"
  type: "Flatten"
  bottom: "conv4_3_norm_mbox_conf_perm"
  top: "conv4_3_norm_mbox_conf_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv4_3_norm_mbox_priorbox"
  type: "PriorBox"
  bottom: "conv4_3_norm"
  bottom: "data"
  top: "conv4_3_norm_mbox_priorbox"
  prior_box_param {
    min_size: 30.0
    max_size: 60.0
    aspect_ratio: 2
    flip: true
    clip: false
    variance: 0.1
    variance: 0.1
    variance: 0.2
    variance: 0.2
    step: 8
    offset: 0.5
  }
}
layer {
  name: "fc7_mbox_loc"
  type: "Convolution"
  bottom: "fc7"
  top: "fc7_mbox_loc"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 24
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "fc7_mbox_loc_perm"
  type: "Permute"
  bottom: "fc7_mbox_loc"
  top: "fc7_mbox_loc_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "fc7_mbox_loc_flat"
  type: "Flatten"
  bottom: "fc7_mbox_loc_perm"
  top: "fc7_mbox_loc_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "fc7_mbox_conf"
  type: "Convolution"
  bottom: "fc7"
  top: "fc7_mbox_conf"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 126
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "fc7_mbox_conf_perm"
  type: "Permute"
  bottom: "fc7_mbox_conf"
  top: "fc7_mbox_conf_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "fc7_mbox_conf_flat"
  type: "Flatten"
  bottom: "fc7_mbox_conf_perm"
  top: "fc7_mbox_conf_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "fc7_mbox_priorbox"
  type: "PriorBox"
  bottom: "fc7"
  bottom: "data"
  top: "fc7_mbox_priorbox"
  prior_box_param {
    min_size: 60.0
    max_size: 111.0
    aspect_ratio: 2
    aspect_ratio: 3
    flip: true
    clip: false
    variance: 0.1
    variance: 0.1
    variance: 0.2
    variance: 0.2
    step: 16
    offset: 0.5
  }
}
layer {
  name: "conv6_2_mbox_loc"
  type: "Convolution"
  bottom: "conv6_2"
  top: "conv6_2_mbox_loc"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 24
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
```

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops_raw	mem_raw
								exp 0	
28	conv4_3_norm_mbox_conf_perm	Permute	1	84	38x38	38	84x38	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
29	conv4_3_norm_mbox_conf_flat	Flatten	1	38	84x38	121296	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 121296 param 0
30	conv4_3_norm_mbox_loc	Convolution	1	512	38x38	16	38x38	macc 106463232 comp 0 add 0 div 0 exp 0	activation 23104 param 73744
31	conv4_3_norm_mbox_loc_perm	Permute	1	16	38x38	38	16x38	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
32	conv4_3_norm_mbox_loc_flat	Flatten	1	38	16x38	23104	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 23104 param 0
33	pool4	Pooling	1	512	38x38	512	19x19	macc 0 comp 739328 add 0 div 0 exp 0	activation 184832 param 0
34	conv5_1	Convolution	1	512	19x19	512	19x19	macc 851705856 comp 0 add 0 div 0 exp 0	activation 184832 param 2359808
35	relu5_1	ReLU	1	512	19x19	512	19x19	macc 0 comp 184832 add 0 div 0 exp 0	activation 184832 param 0
36	conv5_2	Convolution	1	512	19x19	512	19x19	macc 851705856 comp 0 add 0 div 0 exp 0	activation 184832 param 2359808
37	relu5_2	ReLU	1	512	19x19	512	19x19	macc 0 comp 184832 add 0 div 0 exp 0	activation 184832 param 0
38	conv5_3	Convolution	1	512	19x19	512	19x19	macc 851705856 comp 0 add 0 div 0 exp 0	activation 184832 param 2359808
39	relu5_3	ReLU	1	512	19x19	512	19x19	macc 0 comp 184832 add 0 div 0 exp 0	activation 184832 param 0
40	pool5	Pooling	1	512	19x19	512	19x19	macc 0 comp 1663488 add 0 div 0 exp 0	activation 184832 param 0
41	fc6	Convolution	1	512	19x19	1024	19x19	macc 1703411712 comp 0 add 0 div 0 exp 0	activation 369664 param 4719616
42	relu6	ReLU	1	1024	19x19	1024	19x19	macc 0 comp 369664 add 0 div 0 exp 0	activation 369664 param 0
43	fc7	Convolution	1	1024	19x19	1024	19x19	macc 378535936 comp 0 add 0 div 0 exp 0	activation 369664 param 1049600
44	relu7	ReLU	1	1024	19x19	1024	19x19	macc 0 comp 369664 add 0 div 0 exp 0	activation 369664 param 0
45	fc7_mbox_priorbox	PriorBox	1	3	300x300	2	NaNx4	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
46	fc7_mbox_conf	Convolution	1	1024	19x19	126	19x19	macc 419198976 comp 0 add 0 div 0 exp 0	activation 45486 param 1161342
47	fc7_mbox_conf_perm	Permute	1	126	19x19	19	126x19	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
48	fc7_mbox_conf_flat	Flatten	1	19	126x19	45486	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 45486 param 0

```
layer {
  name: "conv6_2_mbox_loc_perm"
  type: "Permute"
  bottom: "conv6_2_mbox_loc"
  top: "conv6_2_mbox_loc_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv6_2_mbox_loc_flat"
  type: "Flatten"
  bottom: "conv6_2_mbox_loc_perm"
  top: "conv6_2_mbox_loc_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv6_2_mbox_conf"
  type: "Convolution"
  bottom: "conv6_2"
  top: "conv6_2_mbox_conf"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 126
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv6_2_mbox_conf_perm"
  type: "Permute"
  bottom: "conv6_2_mbox_conf"
  top: "conv6_2_mbox_conf_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv6_2_mbox_conf_flat"
  type: "Flatten"
  bottom: "conv6_2_mbox_conf_perm"
  top: "conv6_2_mbox_conf_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv6_2_mbox_priorbox"
  type: "PriorBox"
  bottom: "conv6_2"
  bottom: "data"
  top: "conv6_2_mbox_priorbox"
  prior_box_param {
    min_size: 111.0
    max_size: 162.0
    aspect_ratio: 2
    aspect_ratio: 3
    flip: true
    clip: false
    variance: 0.1
    variance: 0.1
    variance: 0.2
    variance: 0.2
    step: 32
    offset: 0.5
  }
}
layer {
  name: "conv7_2_mbox_loc"
  type: "Convolution"
  bottom: "conv7_2"
  top: "conv7_2_mbox_loc"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 24
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv7_2_mbox_loc_perm"
  type: "Permute"
  bottom: "conv7_2_mbox_loc"
  top: "conv7_2_mbox_loc_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv7_2_mbox_loc_flat"
  type: "Flatten"
  bottom: "conv7_2_mbox_loc_perm"
  top: "conv7_2_mbox_loc_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv7_2_mbox_conf"
  type: "Convolution"
  bottom: "conv7_2"
  top: "conv7_2_mbox_conf"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 126
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv7_2_mbox_conf_perm"
  type: "Permute"
  bottom: "conv7_2_mbox_conf"
  top: "conv7_2_mbox_conf_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv7_2_mbox_conf_flat"
  type: "Flatten"
  bottom: "conv7_2_mbox_conf_perm"
  top: "conv7_2_mbox_conf_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv7_2_mbox_priorbox"
  type: "PriorBox"
  bottom: "conv7_2"
  bottom: "data"
  top: "conv7_2_mbox_priorbox"
  prior_box_param {
    min_size: 162.0
    max_size: 213.0
    aspect_ratio: 2
    aspect_ratio: 3
    flip: true
    clip: false
    variance: 0.1
    variance: 0.1
    variance: 0.2
    variance: 0.2
    step: 64
    offset: 0.5
  }
}
layer {
  name: "conv8_2_mbox_loc"
  type: "Convolution"
  bottom: "conv8_2"
  top: "conv8_2_mbox_loc"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
```

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	macc	activation	comp	param	add	div	exp
49	fc7_mbox_loc	Convolution	1	1024	19x19	24	19x19	79847424	8664	0	221208	0	0	0
50	fc7_mbox_loc_perm	Permute	1	24	19x19	19	24x19	0	0	0	0	0	0	0
51	fc7_mbox_loc_flat	Flatten	1	19	24x19	8664	1x1	0	8664	0	0	0	0	0
52	conv6_1	Convolution	1	1024	19x19	256	19x19	94633984	92416	0	262400	0	0	0
53	conv6_1_relu	ReLU	1	256	19x19	256	19x19	0	92416	92416	0	0	0	0
54	conv6_2	Convolution	1	256	19x19	512	10x10	117964800	51200	0	1180160	0	0	0
55	conv6_2_relu	ReLU	1	512	10x10	512	10x10	0	51200	51200	0	0	0	0
56	conv6_2_mbox_priorbox	PriorBox	1	3	300x300	2	NaNx4	0	0	0	0	0	0	0
57	conv6_2_mbox_conf	Convolution	1	512	10x10	126	10x10	58060800	12600	0	580734	0	0	0
58	conv6_2_mbox_conf_perm	Permute	1	126	10x10	10	126x10	0	0	0	0	0	0	0
59	conv6_2_mbox_conf_flat	Flatten	1	10	126x10	12600	1x1	0	12600	0	0	0	0	0
60	conv6_2_mbox_loc	Convolution	1	512	10x10	24	10x10	11059200	2400	0	110616	0	0	0
61	conv6_2_mbox_loc_perm	Permute	1	24	10x10	10	24x10	0	0	0	0	0	0	0
62	conv6_2_mbox_loc_flat	Flatten	1	10	24x10	2400	1x1	0	2400	0	0	0	0	0
63	conv7_1	Convolution	1	512	10x10	128	10x10	6553600	12800	0	65664	0	0	0
64	conv7_1_relu	ReLU	1	128	10x10	128	10x10	0	12800	12800	0	0	0	0
65	conv7_2	Convolution	1	128	10x10	256	5x5	7372800	6400	0	295168	0	0	0
66	conv7_2_relu	ReLU	1	256	5x5	256	5x5	0	6400	6400	0	0	0	0
67	conv7_2_mbox_priorbox	PriorBox	1	3	300x300	2	NaNx4	0	0	0	0	0	0	0
68	conv7_2_mbox_conf	Convolution	1	256	5x5	126	5x5	7257600	3150	0	290430	0	0	0
69	conv7_2_mbox_conf_perm	Permute	1	126	5x5	5	126x5	0	0	0	0	0	0	0

```
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 16
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv8_2_mbox_loc_perm"
  type: "Permute"
  bottom: "conv8_2_mbox_loc"
  top: "conv8_2_mbox_loc_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv8_2_mbox_loc_flat"
  type: "Flatten"
  bottom: "conv8_2_mbox_loc_perm"
  top: "conv8_2_mbox_loc_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv8_2_mbox_conf"
  type: "Convolution"
  bottom: "conv8_2"
  top: "conv8_2_mbox_conf"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 84
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv8_2_mbox_conf_perm"
  type: "Permute"
  bottom: "conv8_2_mbox_conf"
  top: "conv8_2_mbox_conf_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv8_2_mbox_conf_flat"
  type: "Flatten"
  bottom: "conv8_2_mbox_conf_perm"
  top: "conv8_2_mbox_conf_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv8_2_mbox_priorbox"
  type: "PriorBox"
  bottom: "conv8_2"
  bottom: "data"
  top: "conv8_2_mbox_priorbox"
  prior_box_param {
    min_size: 213.0
    max_size: 264.0
    aspect_ratio: 2
    flip: true
    clip: false
    variance: 0.1
    variance: 0.1
    variance: 0.2
    variance: 0.2
    step: 100
    offset: 0.5
  }
}
layer {
  name: "conv9_2_mbox_loc"
  type: "Convolution"
  bottom: "conv9_2"
  top: "conv9_2_mbox_loc"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 16
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv9_2_mbox_loc_perm"
  type: "Permute"
  bottom: "conv9_2_mbox_loc"
  top: "conv9_2_mbox_loc_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv9_2_mbox_loc_flat"
  type: "Flatten"
  bottom: "conv9_2_mbox_loc_perm"
  top: "conv9_2_mbox_loc_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv9_2_mbox_conf"
  type: "Convolution"
  bottom: "conv9_2"
  top: "conv9_2_mbox_conf"
  param {
    lr_mult: 1
    decay_mult: 1
  }
  param {
    lr_mult: 2
    decay_mult: 0
  }
  convolution_param {
    num_output: 84
    pad: 1
    kernel_size: 3
    stride: 1
    weight_filler {
      type: "xavier"
    }
    bias_filler {
      type: "constant"
      value: 0
    }
  }
}
layer {
  name: "conv9_2_mbox_conf_perm"
  type: "Permute"
  bottom: "conv9_2_mbox_conf"
  top: "conv9_2_mbox_conf_perm"
  permute_param {
    order: 0
    order: 2
    order: 3
    order: 1
  }
}
layer {
  name: "conv9_2_mbox_conf_flat"
  type: "Flatten"
  bottom: "conv9_2_mbox_conf_perm"
  top: "conv9_2_mbox_conf_flat"
  flatten_param {
    axis: 1
  }
}
layer {
  name: "conv9_2_mbox_priorbox"
  type: "PriorBox"
  bottom: "conv9_2"
  bottom: "data"
  top: "conv9_2_mbox_priorbox"
  prior_box_param {
    min_size: 264.0
    max_size: 315.0
    aspect_ratio: 2
    flip: true
    clip: false
    variance: 0.1
    variance: 0.1
    variance: 0.2
```

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	
70	conv7_2_mbox_conf_flat	Flatten	1	5	126x5	3150	1x1	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 3150 **param** 0
71	conv7_2_mbox_loc	Convolution	1	256	5x5	24	5x5	**macc** 1382400 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 600 **param** 55320
72	conv7_2_mbox_loc_perm	Permute	1	24	5x5	5	24x5	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 0 **param** 0
73	conv7_2_mbox_loc_flat	Flatten	1	5	24x5	600	1x1	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 600 **param** 0
74	conv8_1	Convolution	1	256	5x5	128	5x5	**macc** 819200 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 3200 **param** 32896
75	conv8_1_relu	ReLU	1	128	5x5	128	5x5	**macc** 0 **comp** 3200 **add** 0 **div** 0 **exp** 0 — **activation** 3200 **param** 0
76	conv8_2	Convolution	1	128	5x5	256	3x3	**macc** 2654208 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 2304 **param** 295168
77	conv8_2_relu	ReLU	1	256	3x3	256	3x3	**macc** 0 **comp** 2304 **add** 0 **div** 0 **exp** 0 — **activation** 2304 **param** 0
78	conv8_2_mbox_priorbox	PriorBox	1	3	300x300	2	852x4	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 0 **param** 0
79	conv8_2_mbox_conf	Convolution	1	256	3x3	84	3x3	**macc** 1741824 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 756 **param** 193620
80	conv8_2_mbox_conf_perm	Permute	1	84	3x3	3	84x3	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 0 **param** 0
81	conv8_2_mbox_conf_flat	Flatten	1	3	84x3	756	1x1	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 756 **param** 0
82	conv8_2_mbox_loc	Convolution	1	256	3x3	16	3x3	**macc** 331776 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 144 **param** 36880
83	conv8_2_mbox_loc_perm	Permute	1	16	3x3	3	16x3	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 0 **param** 0
84	conv8_2_mbox_loc_flat	Flatten	1	3	16x3	144	1x1	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 144 **param** 0
85	conv9_1	Convolution	1	256	3x3	128	3x3	**macc** 294912 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 1152 **param** 32896
86	conv9_1_relu	ReLU	1	128	3x3	128	3x3	**macc** 0 **comp** 1152 **add** 0 **div** 0 **exp** 0 — **activation** 1152 **param** 0
87	conv9_2	Convolution	1	128	3x3	256	1x1	**macc** 294912 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 256 **param** 295168
88	conv9_2_relu	ReLU	1	256	1x1	256	1x1	**macc** 0 **comp** 256 **add** 0 **div** 0 **exp** 0 — **activation** 256 **param** 0
89	conv9_2_mbox_priorbox	PriorBox	1	3	300x300	2	1056x4	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 0 **param** 0
90	mbox_priorbox	Concat	1	12	120x4	12	120x4	**macc** 0 **comp** 0 **add** 0 **div** 0 **exp** 0 — **activation** 5760 **param** 0
91	conv9_2_mbox_conf	Convolution	1	256	1x1	84	1x1	**macc** 193536 — **activation** 84

```
    variance: 0.2
    step: 300
    offset: 0.5
  }
}
layer {
  name: "mbox_loc"
  type: "Concat"
  bottom: "conv4_3_norm_mbox_loc_flat"
  bottom: "fc7_mbox_loc_flat"
  bottom: "conv6_2_mbox_loc_flat"
  bottom: "conv7_2_mbox_loc_flat"
  bottom: "conv8_2_mbox_loc_flat"
  bottom: "conv9_2_mbox_loc_flat"
  top: "mbox_loc"
  concat_param {
    axis: 1
  }
}
layer {
  name: "mbox_conf"
  type: "Concat"
  bottom: "conv4_3_norm_mbox_conf_flat"
  bottom: "fc7_mbox_conf_flat"
  bottom: "conv6_2_mbox_conf_flat"
  bottom: "conv7_2_mbox_conf_flat"
  bottom: "conv8_2_mbox_conf_flat"
  bottom: "conv9_2_mbox_conf_flat"
  top: "mbox_conf"
  concat_param {
    axis: 1
  }
}
layer {
  name: "mbox_priorbox"
  type: "Concat"
  bottom: "conv4_3_norm_mbox_priorbox"
  bottom: "fc7_mbox_priorbox"
  bottom: "conv6_2_mbox_priorbox"
  bottom: "conv7_2_mbox_priorbox"
  bottom: "conv8_2_mbox_priorbox"
  bottom: "conv9_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: 400
    }
    save_output_param {
      output_directory: "/home/weiying1/hyg/caffe-code/faster-rcnn/data/VOCdevkit/results/VOC2007/SSD_300x300/Main"
      output_name_prefix: "comp4_det_test_"
      output_format: "VOC"
      label_map_file: "data/VOC0712/labelmap_voc.prototxt"
      name_size_file: "data/VOC0712/test_name_size.txt"
      num_test_image: 4952
    }
    code_type: CENTER_SIZE
    keep_top_k: 200
    confidence_threshold: 0.01
  }
}
```

								comp 0 add 0 div 0 exp 0	param 193620
92	conv9_2_mbox_conf_perm	Permute	1	84	1x1	1	84x1	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
93	conv9_2_mbox_conf_flat	Flatten	1	1	84x1	84	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 84 param 0
94	mbox_conf	Concat	1	183372	1x1	183372	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 183372 param 0
95	mbox_conf_reshape	Reshape	1	183372	1x1	8732	1x21	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
96	mbox_conf_softmax	Softmax	1	8732	1x21	8732	1x21	macc 0 comp 0 add 183372 div 183372 exp 183372	activation 183372 param 0
97	mbox_conf_flatten	Flatten	1	8732	1x21	183372	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 183372 param 0
98	conv9_2_mbox_loc	Convolution	1	256	1x1	16	1x1	macc 36864 comp 0 add 0 div 0 exp 0	activation 16 param 36880
99	conv9_2_mbox_loc_perm	Permute	1	16	1x1	1	16x1	macc 0 comp 0 add 0 div 0 exp 0	activation 0 param 0
100	conv9_2_mbox_loc_flat	Flatten	1	1	16x1	16	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 16 param 0
101	mbox_loc	Concat	1	34928	1x1	34928	1x1	macc 0 comp 0 add 0 div 0 exp 0	activation 34928 param 0

Excel-compatible Analysis Results (experimental)