

```
1 name: "VGG_ILSVRC_16_layers"
2 layer {
3   name: 'input-data'
4   type: 'Python'
5   top: 'data'
6   top: 'ia_info'
7   top: 'gt_boxes'
8   python_param {
9     module: 'roi_data_layer.layer'
10    layer: 'RoIDataLayer'
11    param_str: '"num_classes': 21"
12  }
13 }
14 layer {
15   name: "conv1_1"
16   type: "Convolution"
17   bottom: "data"
18   top: "conv1_1"
19   param {
20     lr_mult: 0
21     decay_mult: 0
22   }
23   param {
24     lr_mult: 0
25     decay_mult: 0
26   }
27   convolution_param {
28     num_output: 64
29     pad: 1
30     kernel_size: 3
31   }
32 }
33 layer {
34   name: "relu1_1"
35   type: "ReLU"
36   bottom: "conv1_1"
37   top: "conv1_1"
38 }
39 layer {
40   name: "conv1_2"
41   type: "Convolution"
42   bottom: "conv1_1"
43   top: "conv1_2"
44   param {
45     lr_mult: 0
46     decay_mult: 0
47   }
48   param {
49     lr_mult: 0
50     decay_mult: 0
51   }
52   convolution_param {
53     num_output: 64
54     pad: 1
55     kernel_size: 3
56   }
57 }
58 layer {
59   name: "relu1_2"
60   type: "ReLU"
61   bottom: "conv1_2"
62   top: "conv1_2"
63 }
64 layer {
65   name: "pool1"
66   type: "Pooling"
67   bottom: "conv1_2"
68   top: "pool1"
69   pooling_param {
70     pool: MAX
71     kernel_size: 2
72     stride: 2
73   }
74 }
75 layer {
76   name: "conv2_1"
77   type: "Convolution"
78   bottom: "pool1"
79   top: "conv2_1"
80   param {
81     lr_mult: 0
82     decay_mult: 0
83   }
84   param {
85     lr_mult: 0
86     decay_mult: 0
87   }
88   convolution_param {
89     num_output: 128
90     pad: 1
91     kernel_size: 3
92   }
93 }
94 layer {
95   name: "relu2_1"
96   type: "ReLU"
97   bottom: "conv2_1"
98   top: "conv2_1"
99 }
100 layer {
101   name: "conv2_2"
102   type: "Convolution"
103   bottom: "conv2_1"
104   top: "conv2_2"
105   param {
106     lr_mult: 0
107     decay_mult: 0
108   }
109   param {
110     lr_mult: 0
111     decay_mult: 0
112   }
113   convolution_param {
114     num_output: 128
115     pad: 1
116     kernel_size: 3
117   }
118 }
119 layer {
120   name: "relu2_2"
121   type: "ReLU"
122   bottom: "conv2_2"
123   top: "conv2_2"
124 }
125 layer {
126   name: "pool2"
127   type: "Pooling"
128   bottom: "conv2_2"
129   top: "pool2"
130   pooling_param {
131     pool: MAX
132     kernel_size: 2
133     stride: 2
134   }
135 }
136 layer {
137   name: "conv3_1"
138   type: "Convolution"
139   bottom: "pool2"
140   top: "conv3_1"
141   param {
142     lr_mult: 1
143   }
144   param {
145     lr_mult: 2
146   }
147   convolution_param {
148     num_output: 256
149     pad: 1
150     kernel_size: 3
151   }
152 }
153 layer {
154   name: "relu3_1"
155   type: "ReLU"
156   bottom: "conv3_1"
157   top: "conv3_1"
158 }
159 layer {
160   name: "conv3_2"
161   type: "Convolution"
162   bottom: "conv3_1"
163   top: "conv3_2"
```

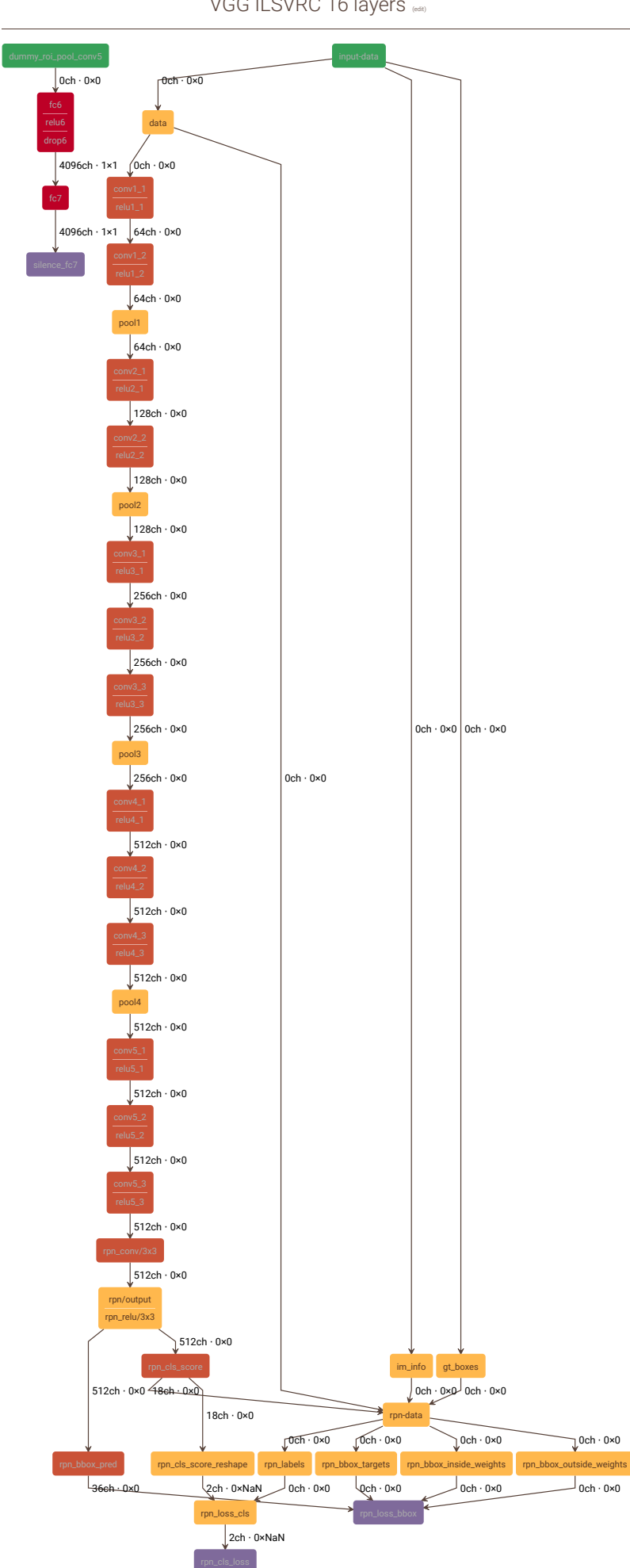
Error Encountered

Unknown Layer: smoothl1loss

```

165 param {
166   lr_mult: 1
167 }
168 param {
169   lr_mult: 2
170 }
171 convolution_param {
172   num_output: 256
173   pad: 1
174   kernel_size: 3
175 }
176 layer {
177   name: "relu3_2"
178   type: "ReLU"
179   bottom: "conv3_2"
180   top: "conv3_2"
181 }
182 layer {
183   name: "conv3_3"
184   type: "Convolution"
185   bottom: "conv3_2"
186   top: "conv3_3"
187 }
188 param {
189   lr_mult: 1
190 }
191 param {
192   lr_mult: 2
193 }
194 convolution_param {
195   num_output: 256
196   pad: 1
197   kernel_size: 3
198 }
199 layer {
200   name: "relu3_3"
201   type: "ReLU"
202   bottom: "conv3_3"
203   top: "conv3_3"
204 }
205 layer {
206   name: "pool3"
207   type: "Pooling"
208   bottom: "conv3_3"
209   top: "pool3"
210 }
211 pooling_param {
212   pool: MAX
213   kernel_size: 2
214   stride: 2
215 }
216 layer {
217   name: "conv4_1"
218   type: "Convolution"
219   bottom: "pool3"
220   top: "conv4_1"
221   param {
222     lr_mult: 1
223   }
224   param {
225     lr_mult: 2
226   }
227   convolution_param {
228     num_output: 512
229     pad: 1
230     kernel_size: 3
231   }
232 }
233 layer {
234   name: "relu4_1"
235   type: "ReLU"
236   bottom: "conv4_1"
237   top: "conv4_1"
238 }
239 layer {
240   name: "conv4_2"
241   type: "Convolution"
242   bottom: "conv4_1"
243   top: "conv4_2"
244   param {
245     lr_mult: 1
246   }
247   param {
248     lr_mult: 2
249   }
250   convolution_param {
251     num_output: 512
252     pad: 1
253     kernel_size: 3
254   }
255 }
256 layer {
257   name: "relu4_2"
258   type: "ReLU"
259   bottom: "conv4_2"
260   top: "conv4_2"
261 }
262 layer {
263   name: "conv4_3"
264   type: "Convolution"
265   bottom: "conv4_2"
266   top: "conv4_3"
267   param {
268     lr_mult: 1
269   }
270   param {
271     lr_mult: 2
272   }
273   convolution_param {
274     num_output: 512
275     pad: 1
276     kernel_size: 3
277   }
278 }
279 layer {
280   name: "relu4_3"
281   type: "ReLU"
282   bottom: "conv4_3"
283   top: "conv4_3"
284 }
285 layer {
286   name: "pool4"
287   type: "Pooling"
288   bottom: "conv4_3"
289   top: "pool4"
290 }
291 pooling_param {
292   pool: MAX
293   kernel_size: 2
294   stride: 2
295 }
296 layer {
297   name: "conv5_1"
298   type: "Convolution"
299   bottom: "pool4"
300   top: "conv5_1"
301   param {
302     lr_mult: 1
303   }
304   param {
305     lr_mult: 2
306   }
307   convolution_param {
308     num_output: 512
309     pad: 1
310     kernel_size: 3
311   }
312 }
313 layer {
314   name: "relu5_1"
315   type: "ReLU"
316   bottom: "conv5_1"
317   top: "conv5_1"
318 }
319 layer {
320   name: "conv5_2"
321   type: "Convolution"
322   bottom: "conv5_1"
323   top: "conv5_2"
324   param {
325     lr_mult: 1
326   }

```



<http://dgschwend.github.io/netscope/#/editor>

```
327 param {
328   lr_mult: 2
329 }
330 convolution_param {
331   num_output: 512
332   pad: 1
333   kernel_size: 3
334 }
335 }
336 layer {
337   name: "relu5_2"
338   type: "ReLU"
339   bottom: "conv5_2"
340   top: "conv5_2"
341 }
342 layer {
343   name: "conv5_3"
344   type: "Convolution"
345   bottom: "conv5_2"
346   top: "conv5_3"
347   param {
348     lr_mult: 1
349   }
350   param {
351     lr_mult: 2
352   }
353   convolution_param {
354     num_output: 512
355     pad: 1
356     kernel_size: 3
357   }
358 }
359 layer {
360   name: "relu5_3"
361   type: "ReLU"
362   bottom: "conv5_3"
363   top: "conv5_3"
364 }
365 #===== RPN =====
366 layer {
367   name: "rpn_conv/3x3"
368   type: "Convolution"
369   bottom: "conv5_3"
370   top: "rpn/output"
371   param { lr_mult: 1.0 }
372   param { lr_mult: 2.0 }
373   convolution_param {
374     num_output: 512
375     kernel_size: 3 pad: 1 stride: 1
376     weight_filler { type: "gaussian" std: 0.01 }
377     bias_filler { type: "constant" value: 0 }
378   }
379 }
380 layer {
381   name: "rpn_relu/3x3"
382   type: "ReLU"
383   bottom: "rpn/output"
384   top: "rpn/output"
385 }
386 layer {
387   name: "rpn_cls_score"
388   type: "Convolution"
389   bottom: "rpn/output"
390   top: "rpn_cls_score"
391   param { lr_mult: 1.0 }
392   param { lr_mult: 2.0 }
393   convolution_param {
394     num_output: 18 # 2(bg/fg) * 9(anchors)
395     kernel_size: 1 pad: 0 stride: 1
396     weight_filler { type: "gaussian" std: 0.01 }
397     bias_filler { type: "constant" value: 0 }
398   }
399 }
400 layer {
401   name: "rpn_bbox_pred"
402   type: "Convolution"
403   bottom: "rpn/output"
404   top: "rpn_bbox_pred"
405   param { lr_mult: 1.0 }
406   param { lr_mult: 2.0 }
407   convolution_param {
408     num_output: 36 # 4 * 9(anchors)
409     kernel_size: 1 pad: 0 stride: 1
410     weight_filler { type: "gaussian" std: 0.01 }
411     bias_filler { type: "constant" value: 0 }
412   }
413 }
414 layer {
415   bottom: "rpn_cls_score"
416   top: "rpn_cls_score_reshape"
417   name: "rpn_cls_score_reshape"
418   type: "Reshape"
419   reshape_param { shape { dim: 0 dim: 2 dim: -1 dim: 0 } }
420 }
421 layer {
422   name: "rpn-data"
423   type: "Python"
424   bottom: "rpn_cls_score"
425   bottom: "gt_boxes"
426   bottom: "ia_info"
427   bottom: "data"
428   top: "rpn_labels"
429   top: "rpn_bbox_targets"
430   top: "rpn_bbox_inside_weights"
431   top: "rpn_bbox_outside_weights"
432   python_param {
433     module: "rpn_anchor_target_layer"
434     layer: "AnchorTargetLayer"
435     param_str: "'feat_stride': 16"
436   }
437 }
438 layer {
439   name: "rpn_loss_cls"
440   type: "SoftmaxWithLoss"
441   bottom: "rpn_cls_score_reshape"
442   bottom: "rpn_labels"
443   propagate_down: 1
444   propagate_down: 0
445   top: "rpn_cls_loss"
446   loss_weight: 1
447   loss_param {
448     ignore_label: -1
449     normalize: true
450   }
451 }
452 layer {
453   name: "rpn_loss_bbox"
454   type: "SmoothL1Loss"
455   bottom: "rpn_bbox_targets"
456   bottom: "rpn_bbox_inside_weights"
457   bottom: "rpn_bbox_outside_weights"
458   top: "rpn_loss_bbox"
459   loss_weight: 1
460   smooth_l1_loss_param { sigma: 3.0 }
461 }
462 #===== RCNN =====
463 # Dummy layers so that initial parameters are saved into the output net
464 layer {
465   name: "dummy_roi_pool_conv5"
466   type: "DummyData"
467   top: "dummy_roi_pool_conv5"
468   dummy_data_param {
469     shape { dim: 1 dim: 25088 }
470     data_filler { type: "constant" value: 0 }
471   }
472 }
473 layer {
474   name: "fc6"
475   type: "InnerProduct"
476   bottom: "dummy_roi_pool_conv5"
477   top: "fc6"
478   param { lr_mult: 0 decay_mult: 0 }
```

Network Analysis

Summary:

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops	mem
1	input-data	Python			undefinedxundefined	0	0x0		
2	dummy_roi_pool_conv5	DummyData			undefinedxundefined	0	0x0		
3	fc6	InnerProduct	0	0x0		4096	1x1		<u>param</u> 4.1k
4	relu6	ReLU	4096	1x1		4096	1x1		
5	drop6	Dropout	4096	1x1		4096	1x1		
6	fc7	InnerProduct	4096	1x1		4096	1x1		<u>param</u> 16.78M
7	silence_fc7	Silence	4096	1x1		0	0x0		
8	data	implicit	0	0x0		0	0x0		
9	conv1_1	Convolution	0	0x0		64	0x0		<u>param</u> 64
10	relu1_1	ReLU	64	0x0		64	0x0		
11	conv1_2	Convolution	64	0x0		64	0x0		<u>param</u> 36.93k
12	relu1_2	ReLU	64	0x0		64	0x0		
13	pool1	Pooling	64	0x0		64	0x0		
14	conv2_1	Convolution	64	0x0		128	0x0		<u>param</u> 73.86k
15	relu2_1	ReLU	128	0x0		128	0x0		
16	conv2_2	Convolution	128	0x0		128	0x0		<u>param</u> 147.58k
17	relu2_2	ReLU	128	0x0		128	0x0		
18	pool2	Pooling	128	0x0		128	0x0		
19	conv3_1	Convolution	128	0x0		256	0x0		<u>param</u> 295.17k
20	relu3_1	ReLU	256	0x0		256	0x0		
21	conv3_2	Convolution	256	0x0		256	0x0		<u>param</u> 590.08k
22	relu3_2	ReLU	256	0x0		256	0x0		
23	conv3_3	Convolution	256	0x0		256	0x0		<u>param</u> 590.08k
24	relu3_3	ReLU	256	0x0		256	0x0		
25	pool3	Pooling	256	0x0		256	0x0		
26	conv4_1	Convolution	256	0x0		512	0x0		<u>param</u> 1.18M
27	relu4_1	ReLU	512	0x0		512	0x0		
28	conv4_2	Convolution	512	0x0		512	0x0		<u>param</u> 2.36M
29	relu4_2	ReLU	512	0x0		512	0x0		
30	conv4_3	Convolution	512	0x0		512	0x0		<u>param</u> 2.36M
31	relu4_3	ReLU	512	0x0		512	0x0		
32	pool4	Pooling	512	0x0		512	0x0		
33	conv5_1	Convolution	512	0x0		512	0x0		<u>param</u> 2.36M
34	relu5_1	ReLU	512	0x0		512	0x0		
35	conv5_2	Convolution	512	0x0		512	0x0		<u>param</u> 2.36M
36	relu5_2	ReLU	512	0x0		512	0x0		
37	conv5_3	Convolution	512	0x0		512	0x0		<u>param</u> 2.36M
38	relu5_3	ReLU	512	0x0		512	0x0		
39	rpn_conv/3x3	Convolution	512	0x0		512	0x0		<u>param</u> 2.36M
40	im_info	implicit	0	0x0		0	0x0		
41	gt_boxes	implicit	0	0x0		0	0x0		
42	rpn/output	implicit	512	0x0		512	0x0		
43	rpn_relu/3x3	ReLU	512	0x0		512	0x0		
44	rpn_bbox_pred	Convolution	512	0x0		36	0x0		<u>param</u> 18.47k
45	rpn_cls_score	Convolution	512	0x0		18	0x0		<u>param</u> 9.23k
46	rpn-data	Python	18	0x0		0	0x0		
47	rpn_cls_score_reshape	Reshape	18	0x0		2	0xNaN		
48	rpn_labels	implicit	0	0x0		0	0x0		
49	rpn_loss_cls	SoftmaxWithLoss	2	0xNaN		2	0xNaN		
50	rpn_bbox_targets	implicit	0	0x0		0	0x0		
51	rpn_bbox_inside_weights	implicit	0	0x0		0	0x0		
52	rpn_bbox_outside_weights	implicit	0	0x0		0	0x0		
53	rpn_loss_bbox	SmoothL1Loss	36	0x0		0	0x0		
54	rpn_cls_loss	implicit	2	0xNaN		2	0xNaN		
TOTAL									<u>macc</u> NaN <u>activation</u> NaN
									<u>comp</u> NaN <u>param</u> 33.89M
									<u>add</u> NaN
									<u>div</u> NaN
									<u>exp</u> NaN

Details:

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops_raw	mem_raw
1	input-data	Python			undefinedxundefined	0	0x0	<u>macc</u> 0 <u>activation</u> 0	
									<u>comp</u> 0 <u>param</u> 0
									<u>add</u> 0
									<u>div</u> 0
									<u>exp</u> 0
2	dummy_roi_pool_conv5	DummyData			undefinedxundefined	0	0x0	<u>macc</u> 0 <u>activation</u> 0	
									<u>comp</u> 0 <u>param</u> 0
									<u>add</u> 0
									<u>div</u> 0
									<u>exp</u> 0

```
490 param { lr_mult: 0 decay_mult: 0 }
491 inner_product_param {
492   num_output: 4096
493 }
494 }
495 layer {
496   name: "relu6"
497   type: "ReLU"
498   bottom: "fc6"
499   top: "fc6"
500 }
501 layer {
502   name: "drop6"
503   type: "Dropout"
504   bottom: "fc6"
505   top: "fc6"
506   dropout_param {
507     dropout_ratio: 0.5
508   }
509 }
510 layer {
511   name: "fc7"
512   type: "InnerProduct"
513   bottom: "fc6"
514   top: "fc7"
515   param { lr_mult: 0 decay_mult: 0 }
516   param { lr_mult: 0 decay_mult: 0 }
517   inner_product_param {
518     num_output: 4096
519   }
520 }
521 layer {
522   name: "silence_fc7"
523   type: "Silence"
524   bottom: "fc7"
525 }
526
```

VGG ILSVRC 16 layers — Netscope CNN Analyzer

3	fc6	InnerProduct		0	0x0	4096	1x1	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>NaN</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>4096</div></div>
4	relu6	ReLU		4096	1x1	4096	1x1	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
5	drop6	Dropout		4096	1x1	4096	1x1	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
6	fc7	InnerProduct		4096	1x1	4096	1x1	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>NaN</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>16781312</div></div>
7	silence_fc7	Silence		4096	1x1	0	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>0</div><div>0</div></div>
8	data	implicit	?	0	0x0	0	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>0</div><div>0</div></div>
9	conv1_1	Convolution	?	0	0x0	64	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>NaN</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>64</div></div>
10	relu1_1	ReLU	?	64	0x0	64	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
11	conv1_2	Convolution	?	64	0x0	64	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>NaN</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>36928</div></div>
12	relu1_2	ReLU	?	64	0x0	64	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
13	pool1	Pooling	?	64	0x0	64	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
14	conv2_1	Convolution	?	64	0x0	128	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>NaN</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>73856</div></div>
15	relu2_1	ReLU	?	128	0x0	128	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
16	conv2_2	Convolution	?	128	0x0	128	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>NaN</div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>147584</div></div>
ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	<div><div>add</div><div>sub</div><div>div</div><div>exp</div></div> <div><div>0</div><div>0</div><div>0</div><div>0</div></div> <div><div>mem_raw</div></div>
17	relu2_2	ReLU	?	128	0x0	128	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>
18	pool2	Pooling	?	128	0x0	128	0x0	<div><div>macc</div><div>comp</div><div>add</div><div>div</div><div>exp</div></div> <div><div>0</div><div>NaN</div><div>0</div><div>0</div><div>0</div></div> <div><div>activation</div><div>param</div></div> <div><div>NaN</div><div>0</div></div>

									exp	0	
19	conv3_1	Convolution	?	128	0x0	256	0x0		mac	NaN	activation NaN
									comp	0	param 295168
									add	0	
									div	0	
									exp	0	
20	relu3_1	ReLU	?	256	0x0	256	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
21	conv3_2	Convolution	?	256	0x0	256	0x0		mac	NaN	activation NaN
									comp	0	param 590080
									add	0	
									div	0	
									exp	0	
22	relu3_2	ReLU	?	256	0x0	256	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
23	conv3_3	Convolution	?	256	0x0	256	0x0		mac	NaN	activation NaN
									comp	0	param 590080
									add	0	
									div	0	
									exp	0	
24	relu3_3	ReLU	?	256	0x0	256	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
25	pool3	Pooling	?	256	0x0	256	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
26	conv4_1	Convolution	?	256	0x0	512	0x0		mac	NaN	activation NaN
									comp	0	param 1180160
									add	0	
									div	0	
									exp	0	
27	relu4_1	ReLU	?	512	0x0	512	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
28	conv4_2	Convolution	?	512	0x0	512	0x0		mac	NaN	activation NaN
									comp	0	param 2359808
									add	0	
									div	0	
									exp	0	
29	relu4_2	ReLU	?	512	0x0	512	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
30	conv4_3	Convolution	?	512	0x0	512	0x0		mac	NaN	activation NaN
									comp	0	param 2359808
									add	0	
									div	0	
									exp	0	
31	relu4_3	ReLU	?	512	0x0	512	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
32	pool4	Pooling	?	512	0x0	512	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	
									exp	0	
33	conv5_1	Convolution	?	512	0x0	512	0x0		mac	NaN	activation NaN
									comp	0	param 2359808
									add	0	
									div	0	
									exp	0	
34	relu5_1	ReLU	?	512	0x0	512	0x0		mac	0	activation NaN
									comp	NaN	param 0
									add	0	
									div	0	

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	exp			activation		
								mac	comp	add	div	exp	param
35	conv5_2	Convolution	?	512	0x0	512	0x0	NaN	0	0	0	0	NaN
								mac	comp	add	div	exp	param
								NaN	0	0	0	0	2359808
								0	NaN	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
36	relu5_2	ReLU	?	512	0x0	512	0x0	0	NaN	0	0	0	NaN
								mac	comp	add	div	exp	param
								0	NaN	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
37	conv5_3	Convolution	?	512	0x0	512	0x0	NaN	0	0	0	0	NaN
								mac	comp	add	div	exp	param
								NaN	0	0	0	0	2359808
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
38	relu5_3	ReLU	?	512	0x0	512	0x0	0	NaN	0	0	0	NaN
								mac	comp	add	div	exp	param
								0	NaN	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
39	rpn_conv/3x3	Convolution	?	512	0x0	512	0x0	NaN	0	0	0	0	NaN
								mac	comp	add	div	exp	param
								NaN	0	0	0	0	2359808
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
40	im_info	implicit	?	0	0x0	0	0x0	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
41	gt_boxes	implicit	?	0	0x0	0	0x0	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
42	rpn/output	implicit	?	512	0x0	512	0x0	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
43	rpn_relu/3x3	ReLU	?	512	0x0	512	0x0	0	NaN	0	0	0	NaN
								mac	comp	add	div	exp	param
								0	NaN	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
44	rpn_bbox_pred	Convolution	?	512	0x0	36	0x0	NaN	0	0	0	0	NaN
								mac	comp	add	div	exp	param
								NaN	0	0	0	0	18468
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
45	rpn_cls_score	Convolution	?	512	0x0	18	0x0	NaN	0	0	0	0	NaN
								mac	comp	add	div	exp	param
								NaN	0	0	0	0	9234
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
46	rpn-data	Python	?	18	0x0	0	0x0	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
47	rpn_cls_score_reshape	Reshape	?	18	0x0	2	0xNaN	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
48	rpn_labels	implicit	?	0	0x0	0	0x0	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
								0	0	0	0	0	0
49	rpn_loss_cls	SoftmaxWithLoss	?	2	0xNaN	2	0xNaN	0	0	0	0	0	NaN
								mac	comp	add	div	exp	param
								0	0	NaN	NaN	NaN	0
								0	NaN	NaN	NaN	NaN	0
								0	NaN	NaN	NaN	NaN	0
								0	NaN	NaN	NaN	NaN	0
50	rpn_bbox_targets	implicit	?	0	0x0	0	0x0	0	0	0	0	0	0
								mac	comp	add	div	exp	param
								0	0	0	0	0	0

									<div>div0</div>	
									<div>exp0</div>	
51	rpn_bbox_inside_weights	implicit	?	0	0x0	0	0x0	<div>macce0</div>	<div>activation0</div>	
								<div>comp0</div>	<div>param0</div>	
								<div>add0</div>		
								<div>div0</div>		
								<div>exp0</div>		
52	rpn_bbox_outside_weights	implicit	?	0	0x0	0	0x0	<div>macce0</div>	<div>activation0</div>	
								<div>comp0</div>	<div>param0</div>	
								<div>add0</div>		
								<div>div0</div>		
								<div>exp0</div>		
53	rpn_loss_bbox	SmoothL1Loss	?	36	0x0	0	0x0	<div>macce0</div>	<div>activation0</div>	
								<div>comp0</div>	<div>param0</div>	
								<div>add0</div>		
								<div>div0</div>		
								<div>exp0</div>		
54	rpn_cls_loss	implicit	?	2	0xNaN	2	0xNaN	<div>macce0</div>	<div>activation0</div>	
								<div>comp0</div>	<div>param0</div>	
								<div>add0</div>		
								<div>div0</div>		
								<div>exp0</div>		
Excel-compatible Analysis Results (experimental)										