/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../1.jpg: Predicted in 41.566000 milli-seconds.

car: 51%

car: 98%

car: 98%

car: 42%

car: 31%

car: 82%

car: 45%

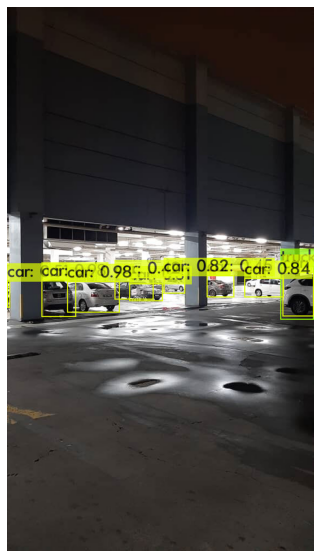
car: 84%

truck: 50%

car: 81%

Unable to init server: Could not connect: Connection refused

(predictions:1159): Gtk-**WARNING** \*\*: 04:32:40.650: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

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40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

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42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../2.jpg: Predicted in 41.481000 milli-seconds.

car: 88%

car: 31%

car: 45%

car: 99%

person: 75%

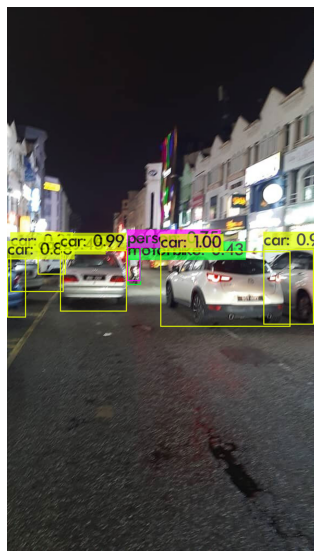
motorbike: 43%

car: 100%

car: 98%

Unable to init server: Could not connect: Connection refused

(predictions:1189): Gtk-**WARNING** \*\*: 04:33:35.584: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

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11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

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20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

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23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

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26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

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45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

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49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

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52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../3.jpg: Predicted in 41.504000 milli-seconds.

car: 98%

car: 100%

car: 94%

car: 71%

car: 99%

car: 66%

car: 100%

Unable to init server: Could not connect: Connection refused

(predictions:1216): Gtk-**WARNING** \*\*: 04:34:25.853: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../4.jpg: Predicted in 41.428000 milli-seconds.

car: 96%

car: 99%

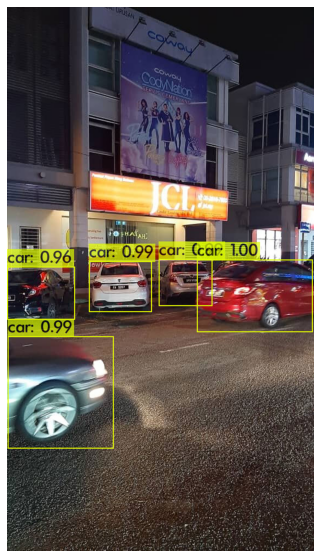
car: 99%

car: 99%

car: 100%

Unable to init server: Could not connect: Connection refused

(predictions:1243): Gtk-**WARNING** \*\*: 04:35:17.126: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../5.jpg: Predicted in 41.548000 milli-seconds.

car: 99%

car: 97%

car: 44%

car: 99%

Unable to init server: Could not connect: Connection refused

(predictions:1267): Gtk-**WARNING** \*\*: 04:36:01.056: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../6.jpg: Predicted in 41.511000 milli-seconds.

car: 26%

car: 47%

car: 100%

car: 97%

car: 48%

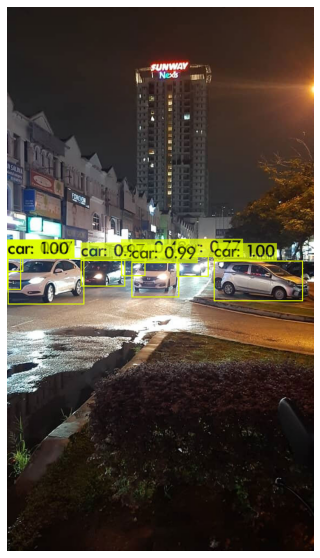
car: 99%

car: 77%

car: 100%

Unable to init server: Could not connect: Connection refused

(predictions:1288): Gtk-**WARNING** \*\*: 04:36:40.062: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../7.jpg: Predicted in 41.476000 milli-seconds.

car: 96%

car: 90%

car: 100%

car: 42%

car: 93%

motorbike: 38%

person: 77%

person: 75%

Unable to init server: Could not connect: Connection refused

(predictions:1318): Gtk-**WARNING** \*\*: 04:37:45.209: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

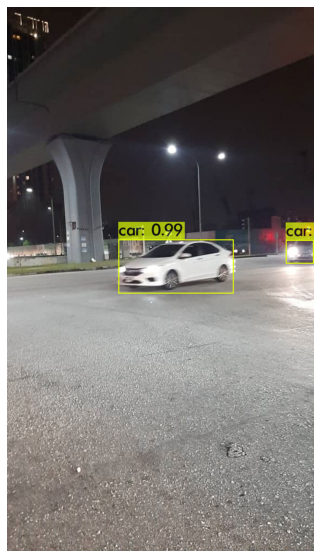
../8.jpg: Predicted in 41.565000 milli-seconds.

car: 99%

car: 78%

Unable to init server: Could not connect: Connection refused

(predictions:1702): Gtk-**WARNING** \*\*: 04:59:13.624: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../9.jpg: Predicted in 41.445000 milli-seconds.

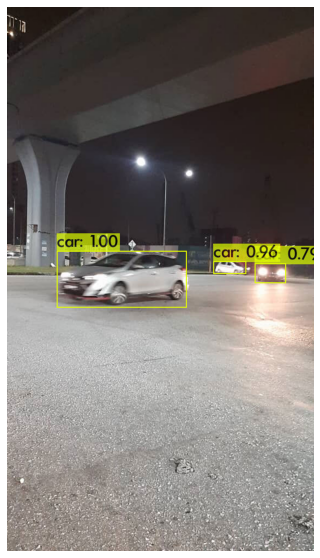
car: 100%

car: 96%

car: 79%

Unable to init server: Could not connect: Connection refused

(predictions:1729): Gtk-**WARNING** \*\*: 05:00:05.634: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../12.jpg: Predicted in 41.533000 milli-seconds.

car: 56%

car: 58%

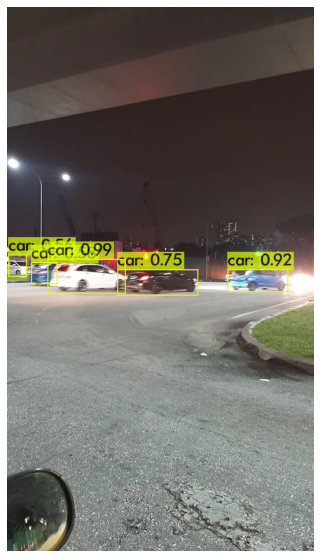
car: 99%

car: 75%

car: 92%

Unable to init server: Could not connect: Connection refused

(predictions:1762): Gtk-**WARNING** \*\*: 05:01:14.816: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../14.jpg: Predicted in 41.422000 milli-seconds.

car: 52%

traffic light: 68%

car: 96%

car: 41%

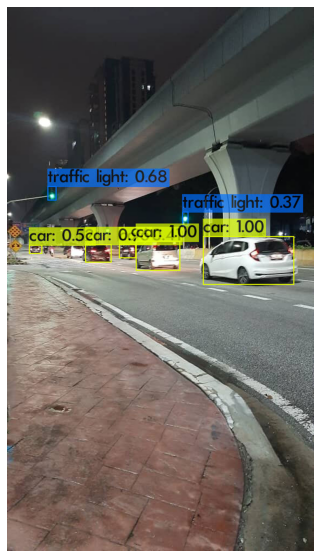
car: 100%

traffic light: 37%

car: 100%

Unable to init server: Could not connect: Connection refused

(predictions:1789): Gtk-**WARNING** \*\*: 05:02:03.535: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../16.jpg: Predicted in 41.502000 milli-seconds.

car: 100%

car: 84%

car: 62%

car: 82%

car: 49%

car: 31%

car: 82%

car: 36%

car: 34%

car: 34%

car: 40%

car: 92%

car: 98%

person: 32%

Unable to init server: Could not connect: Connection refused

(predictions:1816): Gtk-**WARNING** \*\*: 05:03:02.108: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../21.jpg: Predicted in 41.439000 milli-seconds.

car: 64%

bus: 25%

car: 45%

truck: 43%

motorbike: 49%

motorbike: 30%

motorbike: 25%

motorbike: 49%

motorbike: 35%

Unable to init server: Could not connect: Connection refused

(predictions:1843): Gtk-**WARNING** \*\*: 05:03:49.978: cannot open display:



[Errno 20] Not a directory: 'darknet'

/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../22.jpg: Predicted in 41.442000 milli-seconds.

car: 97%

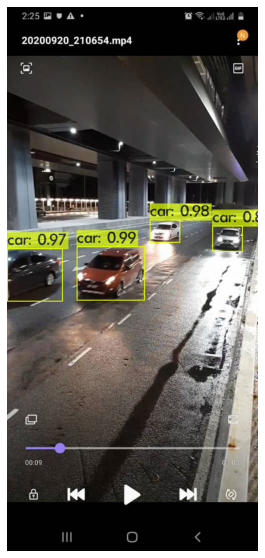
car: 99%

car: 98%

car: 84%

Unable to init server: Could not connect: Connection refused

(predictions:1918): Gtk-**WARNING** \*\*: 05:06:44.603: cannot open display:



/content/darknet

CUDA-version: 10010 (10010), cuDNN: 7.6.5, GPU count: 1

OpenCV version: 3.2.0

0 : compute\_capability = 750, cudnn\_half = 0, GPU: Tesla T4

net.optimized\_memory = 0

mini\_batch = 1, batch = 1, time\_steps = 1, train = 0

layer filters size/strd(dil) input output

0 conv 32 3 x 3/ 1 416 x 416 x 3 -> 416 x 416 x 32 0.299 BF

1 conv 64 3 x 3/ 2 416 x 416 x 32 -> 208 x 208 x 64 1.595 BF

2 conv 32 1 x 1/ 1 208 x 208 x 64 -> 208 x 208 x 32 0.177 BF

3 conv 64 3 x 3/ 1 208 x 208 x 32 -> 208 x 208 x 64 1.595 BF

4 Shortcut Layer: 1, wt = 0, wn = 0, outputs: 208 x 208 x 64 0.003 BF

5 conv 128 3 x 3/ 2 208 x 208 x 64 -> 104 x 104 x 128 1.595 BF

6 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

7 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

8 Shortcut Layer: 5, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

9 conv 64 1 x 1/ 1 104 x 104 x 128 -> 104 x 104 x 64 0.177 BF

10 conv 128 3 x 3/ 1 104 x 104 x 64 -> 104 x 104 x 128 1.595 BF

11 Shortcut Layer: 8, wt = 0, wn = 0, outputs: 104 x 104 x 128 0.001 BF

12 conv 256 3 x 3/ 2 104 x 104 x 128 -> 52 x 52 x 256 1.595 BF

13 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

14 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

15 Shortcut Layer: 12, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

16 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

17 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

18 Shortcut Layer: 15, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

19 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

20 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

21 Shortcut Layer: 18, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

22 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

23 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

24 Shortcut Layer: 21, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

25 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

26 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

27 Shortcut Layer: 24, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

28 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

29 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

30 Shortcut Layer: 27, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

31 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

32 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

33 Shortcut Layer: 30, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

34 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

35 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

36 Shortcut Layer: 33, wt = 0, wn = 0, outputs: 52 x 52 x 256 0.001 BF

37 conv 512 3 x 3/ 2 52 x 52 x 256 -> 26 x 26 x 512 1.595 BF

38 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

39 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

40 Shortcut Layer: 37, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

41 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

42 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

43 Shortcut Layer: 40, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

44 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

45 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

46 Shortcut Layer: 43, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

47 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

48 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

49 Shortcut Layer: 46, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

50 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

51 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

52 Shortcut Layer: 49, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

53 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

54 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

55 Shortcut Layer: 52, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

56 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

57 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

58 Shortcut Layer: 55, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

59 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

60 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

61 Shortcut Layer: 58, wt = 0, wn = 0, outputs: 26 x 26 x 512 0.000 BF

62 conv 1024 3 x 3/ 2 26 x 26 x 512 -> 13 x 13 x1024 1.595 BF

63 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

64 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

65 Shortcut Layer: 62, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

66 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

67 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

68 Shortcut Layer: 65, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

69 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

70 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

71 Shortcut Layer: 68, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

72 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

73 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

74 Shortcut Layer: 71, wt = 0, wn = 0, outputs: 13 x 13 x1024 0.000 BF

75 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

76 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

77 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

78 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

79 conv 512 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 512 0.177 BF

80 conv 1024 3 x 3/ 1 13 x 13 x 512 -> 13 x 13 x1024 1.595 BF

81 conv 255 1 x 1/ 1 13 x 13 x1024 -> 13 x 13 x 255 0.088 BF

82 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

83 route 79 -> 13 x 13 x 512

84 conv 256 1 x 1/ 1 13 x 13 x 512 -> 13 x 13 x 256 0.044 BF

85 upsample 2x 13 x 13 x 256 -> 26 x 26 x 256

86 route 85 61 -> 26 x 26 x 768

87 conv 256 1 x 1/ 1 26 x 26 x 768 -> 26 x 26 x 256 0.266 BF

88 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

89 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

90 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

91 conv 256 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 256 0.177 BF

92 conv 512 3 x 3/ 1 26 x 26 x 256 -> 26 x 26 x 512 1.595 BF

93 conv 255 1 x 1/ 1 26 x 26 x 512 -> 26 x 26 x 255 0.177 BF

94 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

95 route 91 -> 26 x 26 x 256

96 conv 128 1 x 1/ 1 26 x 26 x 256 -> 26 x 26 x 128 0.044 BF

97 upsample 2x 26 x 26 x 128 -> 52 x 52 x 128

98 route 97 36 -> 52 x 52 x 384

99 conv 128 1 x 1/ 1 52 x 52 x 384 -> 52 x 52 x 128 0.266 BF

100 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

101 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

102 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

103 conv 128 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 128 0.177 BF

104 conv 256 3 x 3/ 1 52 x 52 x 128 -> 52 x 52 x 256 1.595 BF

105 conv 255 1 x 1/ 1 52 x 52 x 256 -> 52 x 52 x 255 0.353 BF

106 yolo

[yolo] params: iou loss: mse (2), iou\_norm: 0.75, obj\_norm: 1.00, cls\_norm: 1.00, delta\_norm: 1.00, scale\_x\_y: 1.00

Total BFLOPS 65.879

avg\_outputs = 532444

Allocate additional workspace\_size = 52.43 MB

Loading weights from yolov3.weights...

seen 64, trained: 32013 K-images (500 Kilo-batches\_64)

Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../23.jpg: Predicted in 41.619000 milli-seconds.

car: 75%

car: 99%

car: 96%

car: 28%

car: 97%

Unable to init server: Could not connect: Connection refused

(predictions:1942): Gtk-**WARNING** \*\*: 05:07:30.718: cannot open display:

