/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 41.555000 milli-seconds.

boat: 95%

boat: 39%

car: 89%

Unable to init server: Could not connect: Connection refused

(predictions:1209): Gtk-**WARNING** \*\*: 07:45:22.232: cannot open display:



/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

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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

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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

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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

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

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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

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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

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

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

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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

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94 yolo

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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 41.466000 milli-seconds.

person: 27%

car: 27%

car: 36%

car: 100%

car: 24%

car: 25%

car: 88%

car: 95%

car: 99%

car: 99%

car: 39%

car: 41%

car: 44%

car: 59%

car: 41%

car: 50%

car: 75%

car: 60%

car: 91%

car: 71%

car: 30%

car: 77%

car: 35%

Unable to init server: Could not connect: Connection refused

(predictions:1464): Gtk-**WARNING** \*\*: 08:01:11.451: cannot open display:



/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

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layer filters size/strd(dil) input output

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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

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

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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

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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 41.513000 milli-seconds.

car: 72%

car: 99%

car: 96%

car: 98%

car: 100%

car: 29%

car: 99%

car: 70%

car: 99%

car: 89%

car: 95%

car: 99%

person: 84%

car: 99%

car: 99%

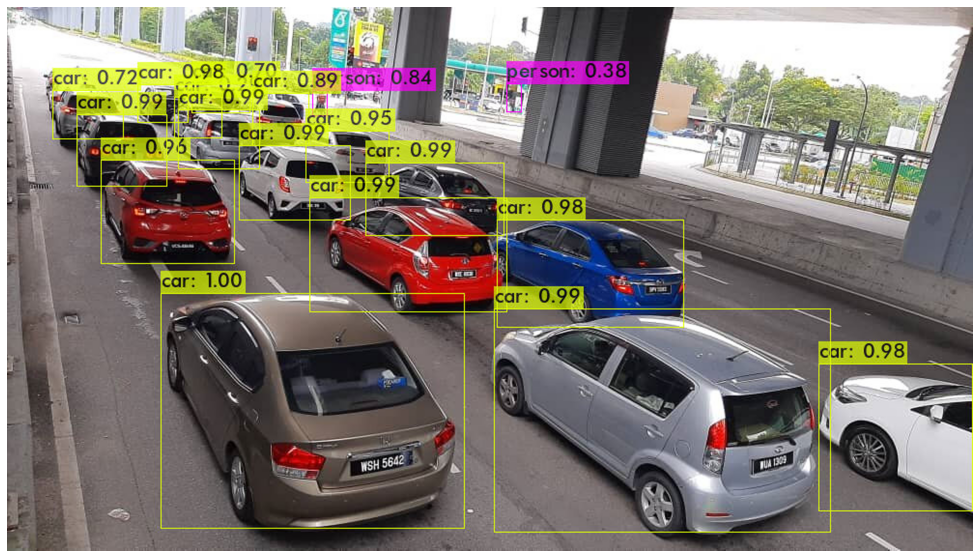
car: 98%

person: 38%

car: 98%

Unable to init server: Could not connect: Connection refused

(predictions:1506): Gtk-**WARNING** \*\*: 08:03:45.410: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.299000 milli-seconds.

motorbike: 99%

motorbike: 95%

person: 37%

motorbike: 92%

motorbike: 93%

car: 100%

car: 80%

Unable to init server: Could not connect: Connection refused

(predictions:1224): Gtk-**WARNING** \*\*: 08:39:18.425: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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

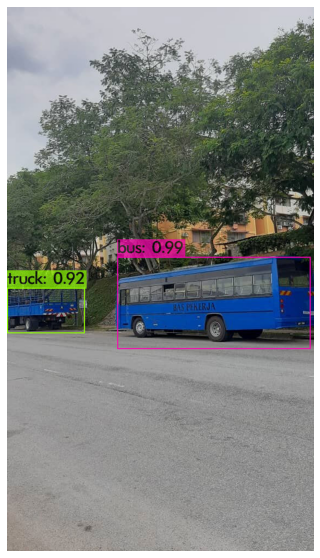
../5.jpg: Predicted in 91.154000 milli-seconds.

truck: 92%

bus: 99%

Unable to init server: Could not connect: Connection refused

(predictions:1251): Gtk-**WARNING** \*\*: 08:40:22.529: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.069000 milli-seconds.

truck: 39%

car: 78%

car: 61%

car: 48%

person: 62%

car: 25%

car: 53%

car: 94%

car: 93%

car: 99%

car: 99%

car: 91%

car: 33%

Unable to init server: Could not connect: Connection refused

(predictions:1272): Gtk-**WARNING** \*\*: 08:41:35.787: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.583000 milli-seconds.

car: 29%

car: 35%

car: 32%

car: 24%

car: 75%

car: 61%

car: 60%

car: 88%

car: 95%

car: 98%

Unable to init server: Could not connect: Connection refused

(predictions:1293): Gtk-**WARNING** \*\*: 08:42:53.704: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.273000 milli-seconds.

car: 97%

car: 100%

car: 98%

car: 26%

car: 78%

car: 55%

car: 54%

car: 54%

car: 79%

truck: 53%

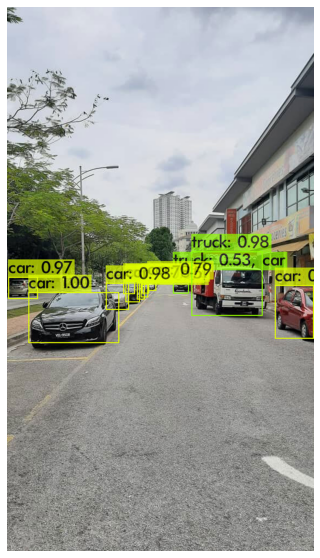
car: 49%

truck: 98%

car: 99%

Unable to init server: Could not connect: Connection refused

(predictions:1311): Gtk-**WARNING** \*\*: 08:44:49.851: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.434000 milli-seconds.

traffic light: 37%

car: 31%

car: 45%

truck: 69%

car: 30%

traffic light: 79%

traffic light: 28%

car: 97%

car: 67%

car: 28%

car: 48%

car: 99%

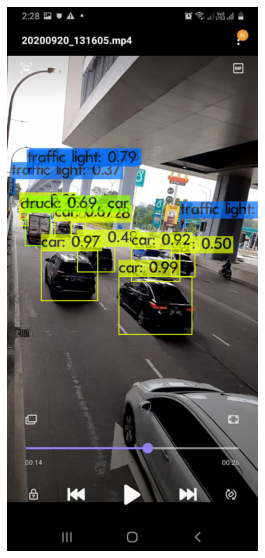
car: 92%

car: 50%

traffic light: 57%

Unable to init server: Could not connect: Connection refused

(predictions:1344): Gtk-**WARNING** \*\*: 08:47:33.084: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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

../10.jpg: Predicted in 91.434000 milli-seconds.

car: 61%

car: 57%

traffic light: 78%

truck: 94%

car: 84%

car: 99%

car: 99%

car: 78%

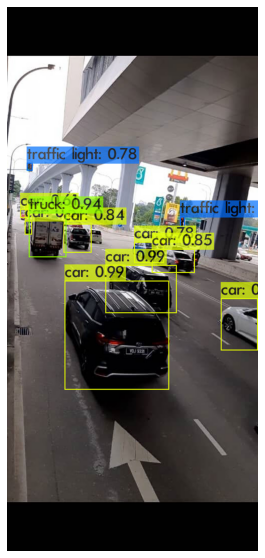
car: 85%

traffic light: 50%

car: 96%

Unable to init server: Could not connect: Connection refused

(predictions:1371): Gtk-**WARNING** \*\*: 08:49:45.105: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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

../11.jpg: Predicted in 91.409000 milli-seconds.

car: 42%

car: 46%

traffic light: 80%

car: 34%

car: 86%

car: 98%

car: 26%

car: 98%

car: 88%

car: 50%

car: 99%

motorbike: 44%

pottedplant: 27%

car: 97%

car: 97%

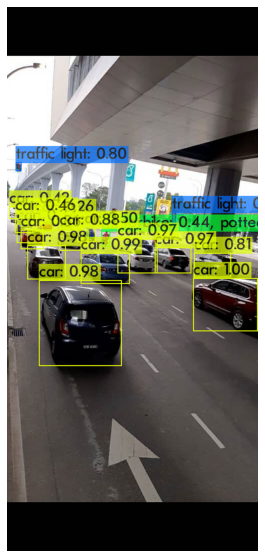
traffic light: 51%

car: 100%

car: 81%

Unable to init server: Could not connect: Connection refused

(predictions:1395): Gtk-**WARNING** \*\*: 09:12:49.497: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.188000 milli-seconds.

truck: 97%

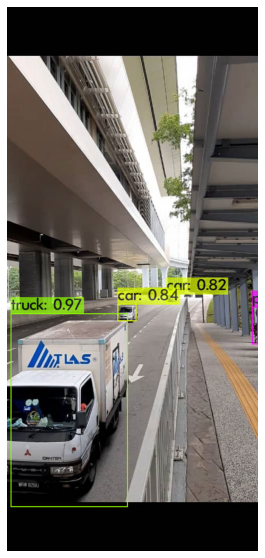
car: 84%

car: 82%

person: 29%

Unable to init server: Could not connect: Connection refused

(predictions:1425): Gtk-**WARNING** \*\*: 09:13:54.914: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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

../13.jpg: Predicted in 91.691000 milli-seconds.

car: 100%

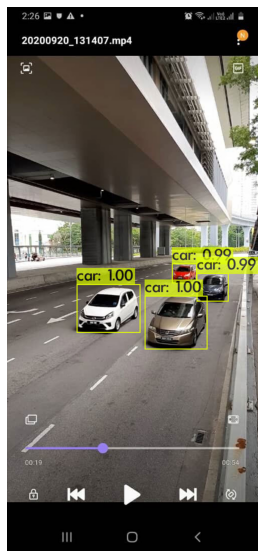
car: 100%

car: 99%

car: 99%

Unable to init server: Could not connect: Connection refused

(predictions:1446): Gtk-**WARNING** \*\*: 09:14:22.452: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.558000 milli-seconds.

car: 100%

car: 100%

car: 48%

Unable to init server: Could not connect: Connection refused

(predictions:1467): Gtk-**WARNING** \*\*: 09:14:51.465: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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

../15.jpg: Predicted in 91.917000 milli-seconds.

car: 75%

car: 99%

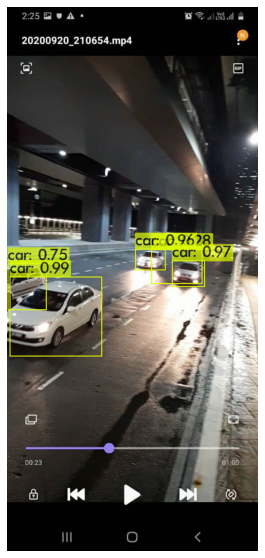
car: 96%

car: 28%

car: 97%

Unable to init server: Could not connect: Connection refused

(predictions:1485): Gtk-**WARNING** \*\*: 09:15:21.773: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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 = 12.46 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 91.702000 milli-seconds.

car: 97%

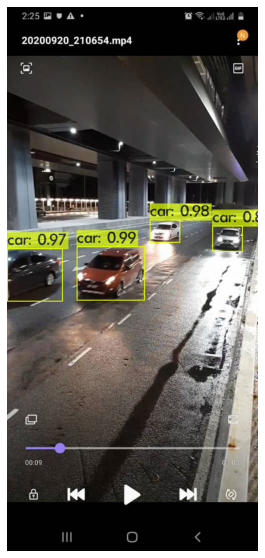
car: 99%

car: 98%

car: 84%

Unable to init server: Could not connect: Connection refused

(predictions:1506): Gtk-**WARNING** \*\*: 09:15:51.219: cannot open display:



/darknet

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

OpenCV version: 3.2.0

0 : compute\_capability = 370, cudnn\_half = 0, GPU: Tesla K80

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

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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

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106 yolo

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Done! Loaded 107 layers from weights-file

Detection layer: 82 - type = 28

Detection layer: 94 - type = 28

Detection layer: 106 - type = 28

../17.jpg: Predicted in 91.638000 milli-seconds.

car: 97%

car: 99%

car: 98%

car: 84%

Unable to init server: Could not connect: Connection refused

(predictions:1527): Gtk-**WARNING** \*\*: 09:16:24.678: cannot open display:

