

```
!git clone https://github.com/pjreddie/darknet
```

```
Cloning into 'darknet'...
remote: Enumerating objects: 5955, done.
remote: Total 5955 (delta 0), reused 0 (delta 0), pack-reused 5955 (from 1)
Receiving objects: 100% (5955/5955), 6.37 MiB | 10.72 MiB/s, done.
Resolving deltas: 100% (3932/3932), done.
```

```
cd darknet
```

```
/content/darknet
```

```
ls
```

```
cfg/      examples/ LICENSE      LICENSE.gen LICENSE.meta LICENSE.v1 python/    scripts/
data/     include/  LICENSE.fuck LICENSE.gpl  LICENSE.mit Makefile  README.md src/
```

```
!make
```

```
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/activations.c -o obj/activations.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/im2col.c -o obj/im2col.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/col2im.c -o obj/col2im.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/blas.c -o obj/blas.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/crop_layer.c -o obj/crop_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/dropout_layer.c -o obj/dropout_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/maxpool_layer.c -o obj/maxpool_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/softmax_layer.c -o obj/softmax_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/data.c -o obj/data.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/matrix.c -o obj/matrix.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/network.c -o obj/network.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/connected_layer.c -o obj/connected_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/cost_layer.c -o obj/cost_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/route_layer.c -o obj/route_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/option_list.c -o obj/option_list.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/detection_layer.c -o obj/detection_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/route_layer.c -o obj/route_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/upsample_layer.c -o obj/upsample_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/box.c -o obj/box.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/normalization_layer.c -o obj/normalization_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/avgpool_layer.c -o obj/avgpool_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/layer.c -o obj/layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/local_layer.c -o obj/local_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/shortcut_layer.c -o obj/shortcut_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/logistic_layer.c -o obj/logistic_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/activation_layer.c -o obj/activation_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/rnn_layer.c -o obj/rnn_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/gru_layer.c -o obj/gru_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/crnn_layer.c -o obj/crnn_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/demo.c -o obj/demo.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/batchnorm_layer.c -o obj/batchnorm_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/region_layer.c -o obj/region_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/reorg_layer.c -o obj/reorg_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/tree.c -o obj/tree.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/lstm_layer.c -o obj/lstm_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/l2norm_layer.c -o obj/l2norm_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/yolo_layer.c -o obj/yolo_layer.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/iseg_layer.c -o obj/iseg_layer.o
g++ -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./src/image_opencv.cpp -o obj/image_opencv.o
gcc -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -shared obj/gemm.o obj/utils.o obj/cuda.o obj/deconvolutional_layer.o
ar rcs libdarknet.a obj/gemm.o obj/utils.o obj/cuda.o obj/deconvolutional_layer.o obj/convolutional_layer.o obj/list.o obj/image.o obj/activations.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/captcha.c -o obj/captcha.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/lsd.c -o obj/lsd.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/super.c -o obj/super.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/art.c -o obj/art.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/tag.c -o obj/tag.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/cifar.c -o obj/cifar.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/go.c -o obj/go.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/rnn.c -o obj/rnn.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/segmenter.c -o obj/segmenter.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/regressor.c -o obj/regressor.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/classifier.c -o obj/classifier.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/coco.c -o obj/coco.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/yolo.c -o obj/yolo.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/detector.c -o obj/detector.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/nightmare.c -o obj/nightmare.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/instance-segmenter.c -o obj/instance-segmenter.o
gcc -Iinclude/ -Isrc/ -Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC -Ofast -c ./examples/darknet.c -o obj/darknet.o
```

```
!wget https://pjreddie.com/media/files/yolov3.weights
```

```
--2024-11-26 18:21:50-- https://pjreddie.com/media/files/yolov3.weights
Resolving pjreddie.com (pjreddie.com)... 162.0.215.52
Connecting to pjreddie.com (pjreddie.com)|162.0.215.52|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 248007048 (237M) [application/octet-stream]
Saving to: 'yolov3.weights.1'
```

```
yolov3.weights.1 100%[=====>] 236.52M 18.0MB/s in 9.6s
```

```
2024-11-26 18:22:00 (24.7 MB/s) - 'yolov3.weights.1' saved [248007048/248007048]
```

```
!./darknet detect cfg/yolov3.cfg yolov3.weights data/dog.jpg
```

```
45 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
46 res 43 38 x 38 x 512 -> 38 x 38 x 512
47 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
48 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
49 res 46 38 x 38 x 512 -> 38 x 38 x 512
50 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
51 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
52 res 49 38 x 38 x 512 -> 38 x 38 x 512
53 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
54 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
55 res 52 38 x 38 x 512 -> 38 x 38 x 512
56 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
57 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
58 res 55 38 x 38 x 512 -> 38 x 38 x 512
59 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
60 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
61 res 58 38 x 38 x 512 -> 38 x 38 x 512
62 conv 1024 3 x 3 / 2 38 x 38 x 512 -> 19 x 19 x1024 3.407 BFLOPs
63 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
64 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
65 res 62 19 x 19 x1024 -> 19 x 19 x1024
66 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
67 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
68 res 65 19 x 19 x1024 -> 19 x 19 x1024
69 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
70 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
71 res 68 19 x 19 x1024 -> 19 x 19 x1024
72 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
73 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
74 res 71 19 x 19 x1024 -> 19 x 19 x1024
75 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
76 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
77 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
78 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
79 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
80 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
81 conv 255 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 255 0.189 BFLOPs
82 yolo
83 route 79
84 conv 256 1 x 1 / 1 19 x 19 x 512 -> 19 x 19 x 256 0.095 BFLOPs
85 upsample 2x 19 x 19 x 256 -> 38 x 38 x 256
86 route 85 61
87 conv 256 1 x 1 / 1 38 x 38 x 768 -> 38 x 38 x 256 0.568 BFLOPs
88 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
89 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
90 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
91 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
92 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
93 conv 255 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 255 0.377 BFLOPs
94 yolo
95 route 91
96 conv 128 1 x 1 / 1 38 x 38 x 256 -> 38 x 38 x 128 0.095 BFLOPs
97 upsample 2x 38 x 38 x 128 -> 76 x 76 x 128
98 route 97 36
99 conv 128 1 x 1 / 1 76 x 76 x 384 -> 76 x 76 x 128 0.568 BFLOPs
100 conv 256 3 x 3 / 1 76 x 76 x 128 -> 76 x 76 x 256 3.407 BFLOPs
101 conv 128 1 x 1 / 1 76 x 76 x 256 -> 76 x 76 x 128 0.379 BFLOPs
102 conv 256 3 x 3 / 1 76 x 76 x 128 -> 76 x 76 x 256 3.407 BFLOPs
103 conv 128 1 x 1 / 1 76 x 76 x 256 -> 76 x 76 x 128 0.379 BFLOPs
```

```
!./darknet detect cfg/yolov3.cfg yolov3.weights data/check.png
```



```

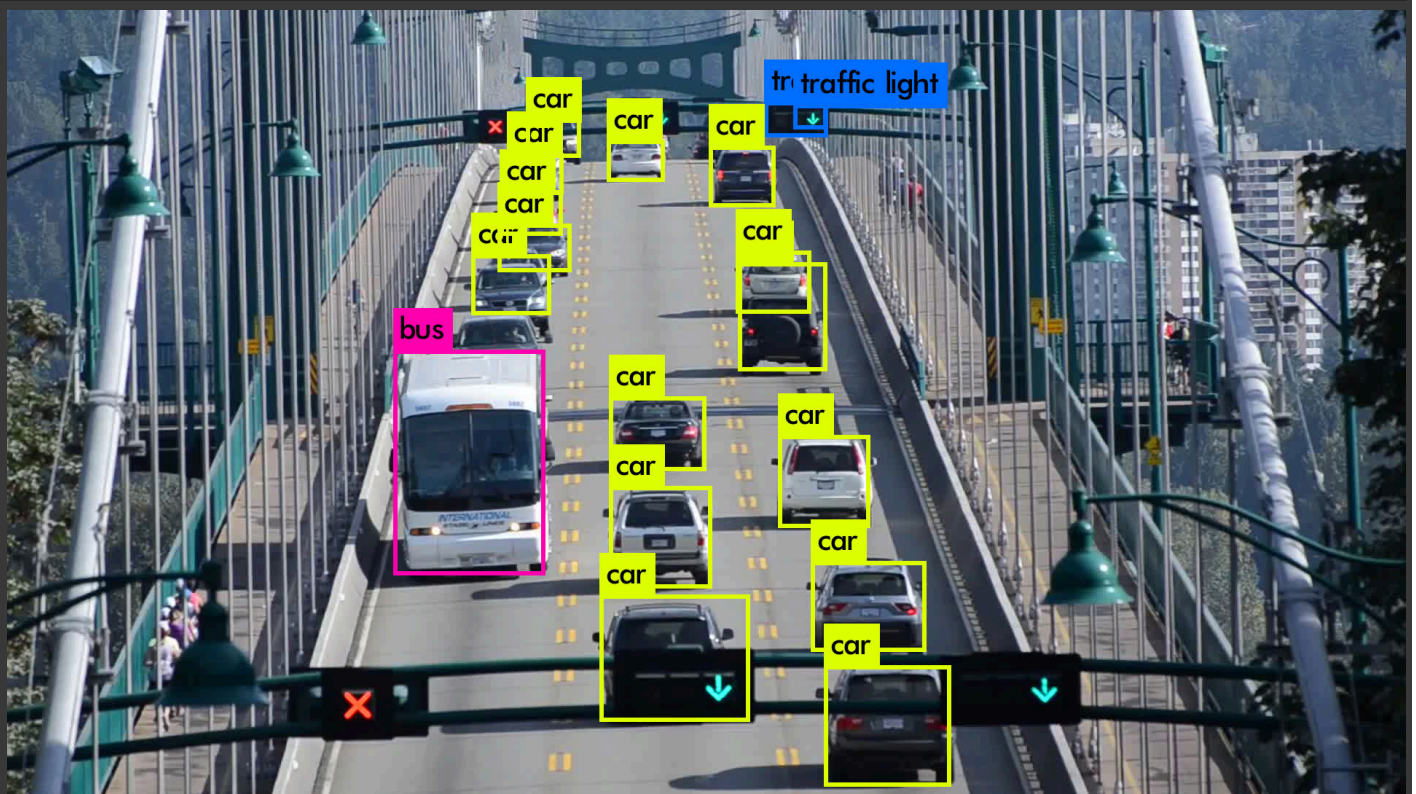
79 conv 512 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 512 0.379 BFLOPs
80 conv 1024 3 x 3 / 1 19 x 19 x 512 -> 19 x 19 x1024 3.407 BFLOPs
81 conv 255 1 x 1 / 1 19 x 19 x1024 -> 19 x 19 x 255 0.189 BFLOPs
82 yolo
83 route 79
84 conv 256 1 x 1 / 1 19 x 19 x 512 -> 19 x 19 x 256 0.095 BFLOPs
85 upsample 2x 19 x 19 x 256 -> 38 x 38 x 256
86 route 85 61
87 conv 256 1 x 1 / 1 38 x 38 x 768 -> 38 x 38 x 256 0.568 BFLOPs
88 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
89 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
90 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
91 conv 256 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 256 0.379 BFLOPs
92 conv 512 3 x 3 / 1 38 x 38 x 256 -> 38 x 38 x 512 3.407 BFLOPs
93 conv 255 1 x 1 / 1 38 x 38 x 512 -> 38 x 38 x 255 0.377 BFLOPs
94 yolo
95 route 91
96 conv 128 1 x 1 / 1 38 x 38 x 256 -> 38 x 38 x 128 0.095 BFLOPs
97 upsample 2x 38 x 38 x 128 -> 76 x 76 x 128
98 route 97 36
99 conv 128 1 x 1 / 1 76 x 76 x 384 -> 76 x 76 x 128 0.568 BFLOPs
100 conv 256 3 x 3 / 1 76 x 76 x 128 -> 76 x 76 x 256 3.407 BFLOPs
101 conv 128 1 x 1 / 1 76 x 76 x 256 -> 76 x 76 x 128 0.379 BFLOPs
102 conv 256 3 x 3 / 1 76 x 76 x 128 -> 76 x 76 x 256 3.407 BFLOPs
103 conv 128 1 x 1 / 1 76 x 76 x 256 -> 76 x 76 x 128 0.379 BFLOPs
104 conv 256 3 x 3 / 1 76 x 76 x 128 -> 76 x 76 x 256 3.407 BFLOPs
105 conv 255 1 x 1 / 1 76 x 76 x 256 -> 76 x 76 x 255 0.754 BFLOPs
106 yolo

```

Loading weights from yolov3.weights...Done!
data/check.png: Predicted in 30.619087 seconds.
traffic light: 57%
traffic light: 53%
bus: 90%
car: 100%
car: 100%
car: 99%
car: 99%

```
from PIL import Image
```

```
img=Image.open("predictions.jpg")
img
```



Start coding or [generate](#) with AI.

