Complex\_yolo\_v3

Params = 62.5M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9765

+ Class '1' (Pedestrian) - AP: 0.7044

+ Class '2' (Cyclist) - AP: 0.864

mAP: 0.8483

Average time for prediction and NMS is 46.56 ms

Average total time for detection is 54.60 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9359

+ Class '1' (Pedestrian) - AP: 0.1558

+ Class '2' (Cyclist) - AP: 0.6165

mAP: 0.5694

Average time for prediction and NMS is 38.17 ms

Average total time for detection is 45.53 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.8347

Dep\_sep\_conv

Params = 12.13M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9713

+ Class '1' (Pedestrian) - AP: 0.6788

+ Class '2' (Cyclist) - AP: 0.8641

mAP: 0.8381

Average time for prediction and NMS is 33.75 ms

Average total time for detection is 40.89 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9231

+ Class '1' (Pedestrian) - AP: 0.2234

+ Class '2' (Cyclist) - AP: 0.6142

mAP: 0.5869

Average time for prediction and NMS is 34.64 ms

Average total time for detection is 42.44 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.822

Mobilenet\_v1.2

Params = 24.2M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9659

+ Class '1' (Pedestrian) - AP: 0.7270

+ Class '2' (Cyclist) - AP: 0.7941

mAP: 0.8290

Average time for prediction and NMS is 44.45 ms

Average total time for detection is 52.92 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.8993

+ Class '1' (Pedestrian) - AP: 0.1553

+ Class '2' (Cyclist) - AP: 0.3605

mAP: 0.4717

Average time for prediction and NMS is 45.02 ms

Average total time for detection is 54.71 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.8068

Mobilenet\_v2

Params = 16.03M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9527

+ Class '1' (Pedestrian) - AP: 0.5474

+ Class '2' (Cyclist) - AP: 0.7424

mAP: 0.7475

Average time for prediction and NMS is 37.15 ms

Average total time for detection is 45.34 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.7595

+ Class '1' (Pedestrian) - AP: 0.0774

+ Class '2' (Cyclist) - AP: 0.1259

mAP: 0.3209

Average time for prediction and NMS is 37.57 ms

Average total time for detection is 47.16 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.6831

Mobilenet\_v2.1

Params = 15.61M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9474

+ Class '1' (Pedestrian) - AP: 0.4889

+ Class '2' (Cyclist) - AP: 0.5621

mAP: 0.6661

Average time for prediction and NMS is 66.39 ms

Average total time for detection is 76.29 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.8507

+ Class '1' (Pedestrian) - AP: 0.0638

+ Class '2' (Cyclist) - AP: 0.2329

mAP: 0.3825

Average time for prediction and NMS is 64.94 ms

Average total time for detection is 77.11 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.6339

Mobilenet\_v2.2

Params = 13.91M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9710

+ Class '1' (Pedestrian) - AP: 0.5976

+ Class '2' (Cyclist) - AP: 0.8098

mAP: 0.7928

Average time for prediction and NMS is 38.31 ms

Average total time for detection is 46.18 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9156

+ Class '1' (Pedestrian) - AP: 0.1523

+ Class '2' (Cyclist) - AP: 0.3875

mAP: 0.4851

Average time for prediction and NMS is 37.85 ms

Average total time for detection is 46.38 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7743

Mobilenet\_v2.3

Params = 8.47M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9685

+ Class '1' (Pedestrian) - AP: 0.5939

+ Class '2' (Cyclist) - AP: 0.7817

mAP: 0.7814

Average time for prediction and NMS is 39.92 ms

Average total time for detection is 48.00 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9007

+ Class '1' (Pedestrian) - AP: 0.1183

+ Class '2' (Cyclist) - AP: 0.5353

mAP: 0.5181

Average time for prediction and NMS is 41.37 ms

Average total time for detection is 50.59 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7587

Mobilenet\_v2.4

Params = 5.7M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9540

+ Class '1' (Pedestrian) - AP: 0.6199

+ Class '2' (Cyclist) - AP: 0.6359

mAP: 0.7366

Average time for prediction and NMS is 37.24 ms

Average total time for detection is 45.77 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.8733

+ Class '1' (Pedestrian) - AP: 0.1151

+ Class '2' (Cyclist) - AP: 0.2621

mAP: 0.4168

Average time for prediction and NMS is 37.23 ms

Average total time for detection is 47.12 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7097

Mobilenet\_v2.5

Params = 7.79M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9644

+ Class '1' (Pedestrian) - AP: 0.5976

+ Class '2' (Cyclist) - AP: 0.7780

mAP: 0.7800

Average time for prediction and NMS is 33.52 ms

Average total time for detection is 41.16 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.8570

+ Class '1' (Pedestrian) - AP: 0.1044

+ Class '2' (Cyclist) - AP: 0.2826

mAP: 0.4147

Average time for prediction and NMS is 35.60 ms

Average total time for detection is 44.57 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7442

Mobilenet\_v2.5.1

Params = 7.79M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9457

+ Class '1' (Pedestrian) - AP: 0.5195

+ Class '2' (Cyclist) - AP: 0.6235

mAP: 0.6963

Average time for prediction and NMS is 50.76 ms

Average total time for detection is 60.26 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.8382

+ Class '1' (Pedestrian) - AP: 0.0553

+ Class '2' (Cyclist) - AP: 0.1580

mAP: 0.3505

Average time for prediction and NMS is 50.77 ms

Average total time for detection is 62.27 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.6604

Peleenet\_v1

Params = 22.13M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9668

+ Class '1' (Pedestrian) - AP: 0.7028

+ Class '2' (Cyclist) - AP: 0.8309

mAP: 0.8335

Average time for prediction and NMS is 35.75 ms

Average total time for detection is 43.43 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9259

+ Class '1' (Pedestrian) - AP: 0.2190

+ Class '2' (Cyclist) - AP: 0.5960

mAP: 0.5803

Average time for prediction and NMS is 35.22 ms

Average total time for detection is 43.42 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.8198

Peleenet\_v1.1

Params = 22.12M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9699

+ Class '1' (Pedestrian) - AP: 0.6847

+ Class '2' (Cyclist) - AP: 0.8339

mAP: 0.8295

Average time for prediction and NMS is 36.56 ms

Average total time for detection is 43.93 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9135

+ Class '1' (Pedestrian) - AP: 0.2328

+ Class '2' (Cyclist) - AP: 0.6113

mAP: 0.5859

Average time for prediction and NMS is 37.50 ms

Average total time for detection is 45.38 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.8107

Peleenet\_v1.1.1

Params = 5.64M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9689

+ Class '1' (Pedestrian) - AP: 0.6615

+ Class '2' (Cyclist) - AP: 0.7992

mAP: 0.8098923917545031

Average time for prediction and NMS is 40.19 ms

Average total time for detection is 47.97 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.8507

+ Class '1' (Pedestrian) - AP: 0.1301

+ Class '2' (Cyclist) - AP: 0.3326

mAP: 0.4378

Average time for prediction and NMS is 39.88 ms

Average total time for detection is 48.37 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7704

Peleenet\_v1.2

Params = 21.46M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9719

+ Class '1' (Pedestrian) - AP: 0.7035

+ Class '2' (Cyclist) - AP: 0.7680

mAP: 0.8145

Average time for prediction and NMS is 34.14 ms

Average total time for detection is 41.78 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9277

+ Class '1' (Pedestrian) - AP: 0.2313

+ Class '2' (Cyclist) - AP: 0.4439

mAP: 0.5343

Average time for prediction and NMS is 34.10 ms

Average total time for detection is 42.64 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7997

Peleenet\_v1.2.1

Params = 4.97M; Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with 64GB RAM and GeForce RTX 2080 Ti

Average Precisions: (IOU = 0.5)

+ Class '0' (Car) - AP: 0.9739

+ Class '1' (Pedestrian) - AP: 0.6241

+ Class '2' (Cyclist) - AP: 0.7809

mAP: 0.793

Average time for prediction and NMS is 35.58 ms

Average total time for detection is 43.37 ms

Average Precisions: (IOU = 0.7)

+ Class '0' (Car) - AP: 0.9192

+ Class '1' (Pedestrian) - AP: 0.2136

+ Class '2' (Cyclist) - AP: 0.4341

mAP: 0.5223

Average time for prediction and NMS is 35.64 ms

Average total time for detection is 44.12 ms

Final mAP (Car [IoU 0.7], Ped and Cyclist [IoU 0.5]): 0.7747