|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | pretrained | freeze | iters | mAP |
| Basic90 | no | No | 10k | 0.19 |
| Resnet | yes | no | 12.5k | 0.23 |
| ResneXt50 | yes | no | 10k | 0.29 |
| ResneXt50 | yes | Yes (last block trained) | 22.5k | 0.17 |
| ResneXt101 | yes | Yes (last 3 block trained) |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Pretrained | Batch size | Learning rate | Data aug. | Optimizer | mAP |
| Resnext50\_1 | Yes, no freeze | 10 | ReduceLROnPlateau:   * Init lr = 1e-4 * Factor = 0.7 * Patience = 3 | RandomMirror  RandomEffect | AdamW | 0.3067 – step 20k  0.3018 – step 10k |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Augmentation:

* Blur = ±0.4
* Brightness = ±0.4
* Contrast = ±0.2
* Saturation = ±0.3
* Sharpness = ±0.5

Ideer

* Sjekk hvor mye plass de forskjellige classes tar i bildet + hvilke calsses som forekommer oftest
* Konverter alle bilder til grayscale i trenings settet
* Start med større resolution og legg til polling midt i nettverket

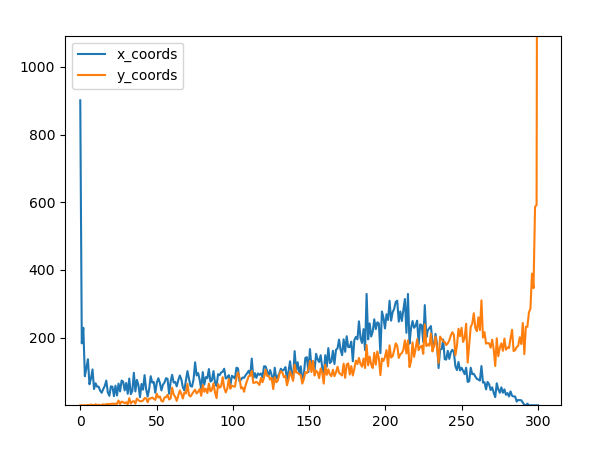
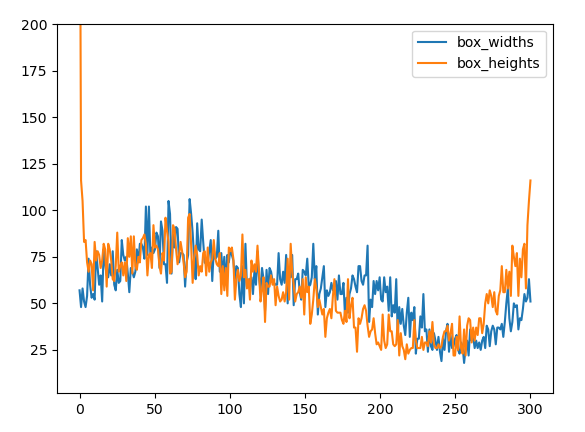
|  |  |
| --- | --- |
| class |  |
| D10 | 4692 |
| D20 | 2544 |
| D30 | 5463 |
| D40 | 4580 |

About dataset:

* Mean = [116.18, 121.74, 121.28]
* Std = [64.97, 67.24, 72.36]



Balanced weights: <https://arxiv.org/ftp/arxiv/papers/2006/2006.01413.pdf>

Box position distribution: (0 = up-left)

|  |  |  |
| --- | --- | --- |
| Output size | # block |  |
| 150x150x64  300x300 | 0 | Conv2d |
|  | 1 | BatchNorm2d |
|  | 2 | ReLU |
| 75x75x64  150x150 | 3 | MaxPool2d |
| 75x75x256  150x150 | 4 | Bottleneck0  Bottleneck1  Bottleneck2 |
| 38x38x512  75x75 | 5 | Bottleneck0  Bottleneck1  Bottleneck2  Bottleneck3 |
| 19x19x1024 | 6 | Bottleneck0  Bottleneck1  Bottleneck2  Bottleneck3  Bottleneck4  Bottleneck5 |
| 10x10x2048 | 7 | Bottleneck0  Bottleneck1  Bottleneck2 |