Vgg

Resnet18

Resnet50

Alexnet

Densenet121

Locality-constrained Linear Coding（LLC）

Linear Spatial Pyramid Matching Using Sparse Coding for Image Classification

Classification of weather situations on single color images

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Alext net | 69.75 | 57.02m | 710.62m |  | 224  224 |
| Vgg13 | 66.78 | 128.97m | 11316.68m |  | 224  224 |
| Densenet121 | 81.07/80.31/82.13(13) | 6.96m |  |  | 576  720 |
| Resnet18 | 81.34 | 11.18m | 1818.56m | checkpoints\my\_data\_v6\_resnet18\12\_31\_11\_29\_fold\_0\_model\_best.pth.tar | 576  720 |
| Ours | 85.40 | 21.68m | 2641.15 | checkpoints\my\_data\_v6\_resnet18\_seg\_a1\_transfer\2\_20\_13\_58\fold\_0\_model\_best.pth.tar | 576  720 |
| Googlenet | 68.44 | 5.16（5.61） | 1503.86m |  | 224 224 |
| Resnet34 | 81.47 | 21.29m | 3670.75m | checkpoints\my\_data\_v6\_resnet34\fold\_0\_model\_best.pth.tar | 576 720 |
| Vgg16 | 69.81 | 134.28m | 15479.79m | checkpoints\my\_data\_v6\_vgg16\fold\_0\_model\_best.pth.tar | 224 224 |

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| Ours | 85.40 | 21.68m | 2641.15 |
| Block3 | 84.96 | 13.28m | 2230.15m |
| Block4 | 84.75 | 19.57m | 2229.87 |
| No block | 83.47 | 11.18m | 1818.58 |
| Block234 | 82.55 | 22.20 | 3053.46 |

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| Ours | 86.57 Gap 0.2 batchsize 32 | checkpoints\my\_data\_v6\_resnet18\_transfer\_480\_my\_triplet\_loss\2\_23\_16\_15\fold\_0\_model\_best.pth.tar | 都是 480 480 |
| Bh | 84.82(3) | checkpoints\my\_data\_v6\_resnet18\_transfer\_480\_triplet\_loss\3\_7\_06\_40\fold\_0\_epoch\_3checkpoint.pth.tar |  |
| Ba | 83.51(18) | checkpoints\my\_data\_v6\_resnet18\_transfer\_480\_triplet\_loss\_ba\3\_9\_01\_57\fold\_0\_model\_best.pth.tar |  |
| Triplet loss | 82.87 (6) | checkpoints\my\_data\_reduce\_v6\_resnet18\_transfer\_480\03\_13\_01\_14\fold\_0\_epoch\_6checkpoint.pth.tar |  |
| Contrast loss |  |  |  |
| Centerloss | 81.65 |  |  |
| Focal loss | 81.48 |  |  |
| Resnet18 | 81.34 | checkpoints\my\_data\_v6\_resnet18\12\_31\_11\_29\_fold\_0\_model\_best.pth.tar |  |
| 上一章 | 85.40 | checkpoints\my\_data\_v6\_resnet18\12\_31\_11\_29\_fold\_0\_model\_best.pth.tar |  |
| MS Loss | 82.63 | checkpoints\my\_data\_v6\_resnet18\_transfer\_480\_ms\_loss\3\_14\_06\_25\fold\_0\_epoch\_3checkpoint.pth.tar |  |

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| --- | --- | --- | --- |
| Gap | Batchsize | Accuracy |  |
| 0.2 | 48 | 86.57 |  |
| 0.3 | 48 | 85.75 |  |
| 0.4 | 48 | 85.26 |  |
| 0.5 | 48 | 85.88 |  |
| 0.2 | 32 | 86.47 |  |
| 0.4 | 32 | 86.20 |  |
| 0.5 | 32 | 83.65 |  |
| 0.3 | 32 | 84.54 |  |
| 0.5 | 16 | 84.08 |  |
| 0.2 | 16 | 83.81 |  |
| 0.3 | 16 | 85.46 |  |
| 0.4 | 16 | 85.02 |  |

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|  | 晴 | 阴 | 雨 | 雾 | 雪 |
| 训练集 | 7006 | 8564 | 8829 | 5145 | 6836 |
| 测试集 | 2552 | 1918 | 1118 | 1743 | 1639 |
| 总计 | 9558 | 10482 | 9947 | 6888 | 8475 |