Modelli di Keras

| MobileN | let | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2676 | | | |
| Guess T5 | 3480 | Model Size | 16 MB | |
| Total | 3923 | | | |
| TOP 1 | 68.21% | Expected TOP 1 | 70.40% | -2.19% |
| TOP 5 | 88.71% | Expected TOP 5 | 89.50% | -0.79% |

| Inceptio | n V3 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2983 | | | |
| Guess T5 | 3643 | Model Size | 92 MB | |
| Total | 3923 | | | |
| TOP 1 | 76.04% | Expected TOP 1 | 77.90% | -1.86% |
| TOP 5 | 92.86% | Expected TOP 5 | 93.70% | -0.84% |

| ResNet | 152 V2 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2699 | | | |
| Guess T5 | 3496 | Model Size | 232 MB | |
| Total | 3923 | | | |
| TOP 1 | 68.80% | Expected TOP 1 | 78.00% | -9.20% |
| TOP 5 | 89.12% | Expected TOP 5 | 94.21% | -5.09% |

| ResNet | 50 V2 | | | |
|----------|--------|----------------|--------|---------|
| Guess T1 | 2567 | | | |
| Guess T5 | 3422 | Model Size | 98 MB | |
| Total | 3923 | | | |
| TOP 1 | 65.43% | Expected TOP 1 | 76.01% | -10.58% |
| TOP 5 | 87.23% | Expected TOP 5 | 92.82% | -5.59% |

Modelli di PyTorch

| MobileNe | etV2 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2809 | | | |
| Guess T5 | 3524 | Model Size | 14 MB | |
| Total | 3923 | | | |
| TOP 1 | 71.60% | Expected TOP 1 | 71.88% | -0.27% |
| TOP 5 | 89.83% | Expected TOP 5 | 90.27% | -0.44% |

| Inception | V3 | | | |
|-----------|--------|----------------|--------|--------|
| Guess T1 | 3015 | | | |
| Guess T5 | 3651 | Model Size | 104 MB | |
| Total | 3923 | | | |
| TOP 1 | 76.85% | Expected TOP 1 | 77.29% | -0.44% |
| TOP 5 | 93.07% | Expected TOP 5 | 93.45% | -0.38% |

| ResNet1 | 52 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 3001 | | | |
| Guess T5 | 3678 | Model Size | 231 MB | |
| Total | 3923 | | | |
| TOP 1 | 76.50% | Expected TOP 1 | 78.31% | -1.81% |
| TOP 5 | 93.75% | Expected TOP 5 | 94.05% | -0.29% |

| AlexNet | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2209 | | | |
| Guess T5 | 3099 | Model Size | 234 MB | |
| Total | 3923 | | | |
| TOP 1 | 56.31% | Expected TOP 1 | 56.52% | -0.21% |
| TOP 5 | 79.00% | Expected TOP 5 | 79.07% | -0.07% |

Keras VS PyTorch

| Diff * | Winner |
|--------|---------|
| -3.39% | PyTorch |
| -1.12% | PyTorch |

| Diff | Winner |
|--------|---------|
| -0.82% | PyTorch |
| -0.20% | PyTorch |

| Diff * | Winner |
|--------|---------|
| -7.70% | PyTorch |
| -4.64% | PyTorch |

| ResNet! | 50 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2661 | | | |
| Guess T5 | 3466 | Model Size | 98 MB | |
| Total | 3923 | | | |
| TOP 1 | 67.83% | Expected TOP 1 | 74.90% | -7.07% |
| TOP 5 | 88.35% | Expected TOP 5 | 91.20% | -2.85% |

| VGG16 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2502 | | | |
| Guess T5 | 3369 | Model Size | 528 MB | |
| Total | 3923 | | | |
| TOP 1 | 63.78% | Expected TOP 1 | 71.30% | -7.52% |
| TOP 5 | 85.88% | Expected TOP 5 | 90.01% | -4.13% |

| VGG19 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2516 | | | |
| Guess T5 | 3365 | Model Size | 549 MB | |
| Total | 3923 | | | |
| TOP 1 | 64.13% | Expected TOP 1 | 71.30% | -7.17% |
| TOP 5 | 85.78% | Expected TOP 5 | 90.00% | -4.22% |

ImageNet

| ResNet50 | O | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2970 | | | |
| Guess T5 | 3650 | Model Size | 98 MB | |
| Total | 3923 | | | |
| TOP 1 | 75.71% | Expected TOP 1 | 76.13% | -0.42% |
| TOP 5 | 93.04% | Expected TOP 5 | 92.86% | 0.18% |

| VGG16 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2762 | | | |
| Guess T5 | 3547 | Model Size | 528 MB | |
| Total | 3923 | | | |
| TOP 1 | 70.41% | Expected TOP 1 | 71.59% | -1.19% |
| TOP 5 | 90.42% | Expected TOP 5 | 90.38% | 0.03% |

| VGG19 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2802 | | | |
| Guess T5 | 3553 | Model Size | 549 MB | |
| Total | 3923 | | | |
| TOP 1 | 71.42% | Expected TOP 1 | 72.38% | -0.95% |
| TOP 5 | 90.57% | Expected TOP 5 | 90.88% | -0.31% |

| Squeeze | Net 1.1 | | | |
|----------|---------|----------------|--------|-------|
| Guess T1 | 2286 | | | |
| Guess T5 | 3173 | Model Size | 5 MB | |
| Total | 3923 | | | |
| TOP 1 | 58.27% | Expected TOP 1 | 58.18% | 0.09% |
| TOP 5 | 80.88% | Expected TOP 5 | 80.62% | 0.26% |

| VGG19 E | BN | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 2877 | | | |
| Guess T5 | 3599 | Model Size | 549 MB | |
| Total | 3923 | | | |
| TOP 1 | 73.34% | Expected TOP 1 | 74.22% | -0.88% |
| TOP 5 | 91.74% | Expected TOP 5 | 91.84% | -0.10% |

| Diff | Winner |
|--------|---------|
| -7.88% | PyTorch |
| -4.69% | PyTorch |

| Diff | Winner |
|--------|---------|
| -6.63% | PyTorch |
| -4.54% | PyTorch |

| Diff | Winner |
|--------|---------|
| -7.29% | PyTorch |
| -4.79% | PyTorch |

Modelli di Keras

| MobileN | let | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 696 | | | |
| Guess T5 | 877 | Model Size | 16 MB | |
| Total | 1000 | | | |
| TOP 1 | 69.60% | Expected TOP 1 | 70.40% | -0.80% |
| TOP 5 | 87.70% | Expected TOP 5 | 89.50% | -1.80% |

| Inception V3 | | | | |
|--------------|--------|----------------|--------|--------|
| Guess T1 | 754 | | | |
| Guess T5 | 926 | Model Size | 92 MB | |
| Total | 1000 | | | |
| TOP 1 | 75.40% | Expected TOP 1 | 77.90% | -2.50% |
| TOP 5 | 92.60% | Expected TOP 5 | 93.70% | -1.10% |

| ResNet: | 152 V2 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 690 | | | |
| Guess T5 | 885 | Model Size | 232 MB | |
| Total | 1000 | | | |
| TOP 1 | 69.00% | Expected TOP 1 | 78.00% | -9.00% |
| TOP 5 | 88.50% | Expected TOP 5 | 94.21% | -5.71% |

| ResNet! | 50 V2 | | | |
|----------|--------|----------------|--------|---------|
| Guess T1 | 651 | | | |
| Guess T5 | 866 | Model Size | 98 MB | |
| Total | 1000 | | | |
| TOP 1 | 65.10% | Expected TOP 1 | 76.01% | -10.91% |
| TOP 5 | 86.60% | Expected TOP 5 | 92.82% | -6.22% |

Modelli di PyTorch

| MobileN | letV2 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 711 | | | |
| Guess T5 | 909 | Model Size | 14 MB | |
| Total | 1000 | | | |
| TOP 1 | 71.10% | Expected TOP 1 | 71.88% | -0.78% |
| TOP 5 | 90.90% | Expected TOP 5 | 90.27% | 0.63% |

| Inceptio | n V3 | | | |
|----------|--------|----------------|--------|-------|
| Guess T1 | 781 | | | |
| Guess T5 | 939 | Model Size | 104 MB | |
| Total | 1000 | | | |
| TOP 1 | 78.10% | Expected TOP 1 | 77.29% | 0.81% |
| TOP 5 | 93.90% | Expected TOP 5 | 93.45% | 0.45% |

| ResNet | 152 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 774 | | | |
| Guess T5 | 947 | Model Size | 231 MB | |
| Total | 1000 | | | |
| TOP 1 | 77.40% | Expected TOP 1 | 78.31% | -0.91% |
| TOP 5 | 94.70% | Expected TOP 5 | 94.05% | 0.65% |

| AlexNet | • | | | |
|----------|--------|----------------|--------|-------|
| Guess T1 | 577 | | | |
| Guess T5 | 802 | Model Size | 234 MB | |
| Total | 1000 | | | |
| TOP 1 | 57.70% | Expected TOP 1 | 56.52% | 1.18% |
| TOP 5 | 80.20% | Expected TOP 5 | 79.07% | 1.13% |

Keras VS PyTorch

| Diff * | Winner |
|--------|---------|
| -1.50% | PyTorch |
| -3.20% | PyTorch |

| Diff | Winner |
|--------|---------|
| -2.70% | PyTorch |
| -1.30% | PyTorch |

| Diff * | Winner |
|--------|---------|
| -8.40% | PyTorch |
| -6.20% | PyTorch |

A-Line

| ResNet! | 50 | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 694 | | | |
| Guess T5 | 897 | Model Size | 98 MB | |
| Total | 1000 | | | |
| TOP 1 | 69.40% | Expected TOP 1 | 74.90% | -5.50% |
| TOP 5 | 89.70% | Expected TOP 5 | 91.20% | -1.50% |

| VGG16 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 631 | | | |
| Guess T5 | 856 | Model Size | 528 MB | |
| Total | 1000 | | | |
| TOP 1 | 63.10% | Expected TOP 1 | 71.30% | -8.20% |
| TOP 5 | 85.60% | Expected TOP 5 | 90.01% | -4.41% |

| VGG19 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 649 | | | |
| Guess T5 | 862 | Model Size | 549 MB | |
| Total | 1000 | | | |
| TOP 1 | 64.90% | Expected TOP 1 | 71.30% | -6.40% |
| TOP 5 | 86.20% | Expected TOP 5 | 90.00% | -3.80% |

| ResNet | 50 | | | |
|----------|--------|----------------|--------|-------|
| Guess T1 | 763 | | | |
| Guess T5 | 934 | Model Size | 98 MB | |
| Total | 1000 | | | |
| TOP 1 | 76.30% | Expected TOP 1 | 76.13% | 0.17% |
| TOP 5 | 93.40% | Expected TOP 5 | 92.86% | 0.54% |

| VGG16 | | | | |
|----------|--------|----------------|--------|-------|
| Guess T1 | 722 | | | |
| Guess T5 | 910 | Model Size | 528 MB | |
| Total | 1000 | | | |
| TOP 1 | 72.20% | Expected TOP 1 | 71.59% | 0.61% |
| TOP 5 | 91.00% | Expected TOP 5 | 90.38% | 0.62% |

| VGG19 | | | | |
|----------|--------|----------------|--------|--------|
| Guess T1 | 730 | | | |
| Guess T5 | 908 | Model Size | 549 MB | |
| Total | 1000 | | | |
| TOP 1 | 73.00% | Expected TOP 1 | 72.38% | 0.62% |
| TOP 5 | 90.80% | Expected TOP 5 | 90.88% | -0.08% |

| Squeez | eNet 1.1 | | | |
|----------|----------|----------------|--------|-------|
| Guess T1 | 612 | | | |
| Guess T5 | 817 | Model Size | 5 MB | |
| Total | 1000 | | | |
| TOP 1 | 61.20% | Expected TOP 1 | 58.18% | 3.02% |
| TOP 5 | 81.70% | Expected TOP 5 | 80.62% | 1.08% |

| VGG19 | BN | | | |
|----------|--------|----------------|--------|-------|
| Guess T1 | 746 | | | |
| Guess T5 | 927 | Model Size | 549 MB | |
| Total | 1000 | | | |
| TOP 1 | 74.60% | Expected TOP 1 | 74.22% | 0.38% |
| TOP 5 | 92.70% | Expected TOP 5 | 91.84% | 0.86% |

| Diff | Winner |
|--------|---------|
| -6.90% | PyTorch |
| -3.70% | PyTorch |

| Diff | Winner |
|--------|---------|
| -9.10% | PyTorch |
| -5.40% | PyTorch |

| Diff | Winner |
|--------|---------|
| -8.10% | PyTorch |
| -4.60% | PyTorch |

| ImageNetMini | | | | |
|--------------|-----------|--------|--|--|
| TOP 1 AVG | TOP 5 AVG | | | |
| -10.61 | .% | -7.43% | | |

| | A-Line | |
|-----------|---------|-----------|
| TOP 1 AVG | | TOP 5 AVG |
| | -12.18% | -8.78% |

MobileNet

| | , . | | | | |
|---------------|--------|--------|-----------|----------|--|
| ImageNet Mini | | | | | |
| | Normal | Vs | GrayScale | ; | |
| Guess T1 | 2676 | | 2284 | Guess T1 | |
| Guess T5 | 3480 | | 3220 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 68.21% | -9.99% | 58.22% | TOP 1 | |
| TOP 5 | 88.71% | -6.63% | 82.08% | TOP 5 | |

| A-Line | | | | | |
|----------|--------|---------|----------|----------|--|
| 1 | Normal | Vs | GrayScal | е | |
| Guess T1 | 696 | | 586 | Guess T1 | |
| Guess T5 | 877 | | 797 | Guess T5 | |
| Total | 1000 | | 1000 | Total | |
| TOP 1 | 69.60% | -11.00% | 58.60% | TOP 1 | |
| TOP 5 | 87.70% | -8.00% | 79.70% | TOP 5 | |

Inception V3

| ImageNet Mini | | | | |
|---------------|--------|--------|-----------|----------|
| | Normal | Vs | GrayScale | |
| Guess T1 | 2983 | | 2702 | Guess T1 |
| Guess T5 | 3643 | | 3486 | Guess T5 |
| Total | 3923 | | 3923 | Total |
| TOP 1 | 76.04% | -7.16% | 68.88% | TOP 1 |
| TOP 5 | 92.86% | -4.00% | 88.86% | TOP 5 |

| A-Line | | | | | |
|----------|--------|--------|----------|----------|--|
| 1 | Normal | Vs | GrayScal | е | |
| Guess T1 | 754 | | 680 | Guess T1 | |
| Guess T5 | 926 | | 883 | Guess T5 | |
| Total | 1000 | | 1000 | Total | |
| TOP 1 | 75.40% | -7.40% | 68.00% | TOP 1 | |
| TOP 5 | 92.60% | -4.30% | 88.30% | TOP 5 | |

ResNet50

| ImageNet Mini | | | | | |
|---------------|--------|---------|-----------|----------|--|
| | Normal | Vs | GrayScale | : | |
| Guess T1 | 2661 | | 2116 | Guess T1 | |
| Guess T5 | 3466 | | 3089 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 67.83% | -13.89% | 53.94% | TOP 1 | |
| TOP 5 | 88.35% | -9.61% | 78.74% | TOP 5 | |

| A-Line | | | | | |
|----------|--------|---------|----------|----------|--|
| 1 | Normal | Vs | GrayScal | е | |
| Guess T1 | 694 | | 532 | Guess T1 | |
| Guess T5 | 897 | | 770 | Guess T5 | |
| Total | 1000 | | 1000 | Total | |
| TOP 1 | 69.40% | -16.20% | 53.20% | TOP 1 | |
| TOP 5 | 89.70% | -12.70% | 77.00% | TOP 5 | |

ResNet152 V2

| LICOLICITO |) | | | | |
|---------------|--------|--------|-----------|----------|--|
| ImageNet Mini | | | | | |
| | Normal | Vs | GrayScale | | |
| Guess T1 | 2699 | | 2369 | Guess T1 | |
| Guess T5 | 3496 | | 3264 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 68.80% | -8.41% | 60.39% | TOP 1 | |
| TOP 5 | 89.12% | -5.91% | 83.20% | TOP 5 | |

| A-Line | | | | | |
|----------|--------|---------|----------|----------|--|
| N | Iormal | Vs | GrayScal | е | |
| Guess T1 | 690 | | 589 | Guess T1 | |
| Guess T5 | 885 | | 822 | Guess T5 | |
| Total | 1000 | | 1000 | Total | |
| TOP 1 | 69.00% | -10.10% | 58.90% | TOP 1 | |
| TOP 5 | 88.50% | -6.30% | 82.20% | TOP 5 | |

VGG19

| ImageNet Mini | | | | |
|---------------------|--------|---------|--------|----------|
| Normal Vs GrayScale | | | | |
| Guess T1 | 2516 | | 1982 | Guess T1 |
| Guess T5 | 3365 | | 2934 | Guess T5 |
| Total | 3923 | | 3923 | Total |
| TOP 1 | 64.13% | -13.61% | 50.52% | TOP 1 |
| TOP 5 | 85.78% | -10.99% | 74.79% | TOP 5 |

| A-Line | | | | | |
|----------|--------|---------|----------|----------|--|
| 1 | Normal | Vs | GrayScal | е | |
| Guess T1 | 649 | | 487 | Guess T1 | |
| Guess T5 | 862 | | 736 | Guess T5 | |
| Total | 1000 | | 1000 | Total | |
| TOP 1 | 64.90% | -16.20% | 48.70% | TOP 1 | |
| TOP 5 | 86.20% | -12.60% | 73.60% | TOP 5 | |

| ImageNet Mini | | | | | |
|---------------------|--------|--|--|--|--|
| TOP 1 AVG TOP 5 AVG | | | | | |
| -13.58% | -9.37% | | | | |

| A-Line | |
|-----------|-----------|
| TOP 1 AVG | TOP 5 AVG |
| -14.60% | -9.99% |

MobileNetV2

| ImageNet Mini | | | | | |
|---------------------|--------|---------|--------|----------|--|
| Normal Vs GrayScale | | | | | |
| Guess T1 | 2809 | | 2319 | Guess T1 | |
| Guess T5 | 3524 | | 3240 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 71.60% | -12.49% | 59.11% | TOP 1 | |
| TOP 5 | 89.83% | -7.24% | 82.59% | TOP 5 | |

| A-Line | | | | | |
|----------|-----------|---------|--------|----------|--|
| Nor | Normal Vs | | | Scale | |
| Guess T1 | 711 | | 588 | Guess T1 | |
| Guess T5 | 909 | | 828 | Guess T5 | |
| Total | 1000 | | 1000 | Total | |
| TOP 1 | 71.10% | -12.30% | 58.80% | TOP 1 | |
| TOP 5 | 90.90% | -8.10% | 82.80% | TOP 5 | |

Inception V3

| ImageNet Mini | | | | | |
|---------------|--------|--------|--------|----------|--|
| 1 | Normal | | Gray: | Scale | |
| Guess T1 | 3015 | | 2757 | Guess T1 | |
| Guess T5 | 3651 | | 3509 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 76.85% | -6.58% | 70.28% | TOP 1 | |
| TOP 5 | 93.07% | -3.62% | 89.45% | TOP 5 | |

| A-Line | | | | |
|----------|--------|--------|--------|----------|
| Nor | mal | Vs | Gray: | Scale |
| Guess T1 | 781 | | 693 | Guess T1 |
| Guess T5 | 939 | | 903 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 78.10% | -8.80% | 69.30% | TOP 1 |
| TOP 5 | 93.90% | -3.60% | 90.30% | TOP 5 |

ResNet152

| ImageNet Mini | | | | | |
|---------------|--------|--------|--------|----------|--|
| Normal | | Vs | Gray: | Scale | |
| Guess T1 | 3001 | | 2682 | Guess T1 | |
| Guess T5 | 3678 | | 3517 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 76.50% | -8.13% | 68.37% | TOP 1 | |
| TOP 5 | 93.75% | -4.10% | 89.65% | TOP 5 | |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Normal | | Vs | Gray: | Scale |
| Guess T1 | 774 | | 673 | Guess T1 |
| Guess T5 | 947 | | 888 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 77.40% | -10.10% | 67.30% | TOP 1 |
| TOP 5 | 94.70% | -5.90% | 88.80% | TOP 5 |

AlexNet

| ,, | ' I | | | | |
|---------------|--------|---------|--------|----------|--|
| ImageNet Mini | | | | | |
| 1 | Normal | Vs | Gray: | Scale | |
| Guess T1 | 2209 | | 1383 | Guess T1 | |
| Guess T5 | 3099 | | 2315 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 56.31% | -21.06% | 35.25% | TOP 1 | |
| TOP 5 | 79.00% | -19.98% | 59.01% | TOP 5 | |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Nor | mal | Vs | Gray: | Scale |
| Guess T1 | 577 | | 349 | Guess T1 |
| Guess T5 | 802 | | 564 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 57.70% | -22.80% | 34.90% | TOP 1 |
| TOP 5 | 80.20% | -23.80% | 56.40% | TOP 5 |

ResNet50

| ImageNet Mini | | | | | |
|---------------|--------|---------|--------|----------|--|
| 1 | Normal | Vs | Gray | Scale | |
| Guess T1 | 2970 | | 2525 | Guess T1 | |
| Guess T5 | 3650 | | 3419 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 75.71% | -11.34% | 64.36% | TOP 1 | |
| TOP 5 | 93.04% | -5.89% | 87.15% | TOP 5 | |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Nor | mal | Vs | Gray: | Scale |
| Guess T1 | 763 | | 644 | Guess T1 |
| Guess T5 | 934 | | 863 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 76.30% | -11.90% | 64.40% | TOP 1 |
| TOP 5 | 93.40% | -7.10% | 86.30% | TOP 5 |

VGG16

| ImagaNat Mini | | | | | | |
|---------------|--------|---------|--------|----------|--|--|
| ImageNet Mini | | | | | | |
| 1 | Normal | Vs | Gray: | Scale | | |
| Guess T1 | 2762 | | 2288 | Guess T1 | | |
| Guess T5 | 3547 | | 3233 | Guess T5 | | |
| Total | 3923 | | 3923 | Total | | |
| TOP 1 | 70.41% | -12.08% | 58.32% | TOP 1 | | |
| TOP 5 | 90.42% | -8.00% | 82.41% | TOP 5 | | |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Nor | mal | Vs | Gray | Scale |
| Guess T1 | 722 | | 552 | Guess T1 |
| Guess T5 | 910 | | 812 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 72.20% | -17.00% | 55.20% | TOP 1 |
| TOP 5 | 91.00% | -9.80% | 81.20% | TOP 5 |

VGG19

| ImageNet Mini | | | | | |
|---------------|--------|---------|-----------|----------|--|
| Normal | | Vs | GrayScale | | |
| Guess T1 | 2802 | | 2365 | Guess T1 | |
| Guess T5 | 3553 | | 3263 | Guess T5 | |
| Total | 3923 | | 3923 | Total | |
| TOP 1 | 71.42% | -11.14% | 60.29% | TOP 1 | |
| TOP 5 | 90.57% | -7.39% | 83.18% | TOP 5 | |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Nor | mal | Vs | Gray: | Scale |
| Guess T1 | 730 | | 564 | Guess T1 |
| Guess T5 | 908 | | 821 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 73.00% | -16.60% | 56.40% | TOP 1 |
| TOP 5 | 90.80% | -8.70% | 82.10% | TOP 5 |

SqueezeNet 1.1

| | Ima | geNet Mini | | |
|----------|------------|------------|--------|----------|
| 1 | Normal | Vs | Gray: | Scale |
| Guess T1 | 2809 | | 1630 | Guess T1 |
| Guess T5 | 3524 | | 2620 | Guess T5 |
| Total | Total 3923 | | 3923 | Total |
| TOP 1 | 71.60% | -30.05% | 41.55% | TOP 1 |
| TOP 5 | 89.83% | -23.04% | 66.79% | TOP 5 |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Normal | | Vs | Gray: | Scale |
| Guess T1 | 612 | | 406 | Guess T1 |
| Guess T5 | 817 | | 658 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 61.20% | -20.60% | 40.60% | TOP 1 |
| TOP 5 | 81.70% | -15.90% | 65.80% | TOP 5 |

VGG19 BN

| ImageNet Mini | | | | |
|---------------|-----------|--------|--------|----------|
| 1 | Normal | Vs | Gray: | Scale |
| Guess T1 | 2877 | | 2512 | Guess T1 |
| Guess T5 | 3599 | | 3399 | Guess T5 |
| Total | otal 3923 | | 3923 | Total |
| TOP 1 | 73.34% | -9.30% | 64.03% | TOP 1 |
| TOP 5 | 91.74% | -5.10% | 86.64% | TOP 5 |

| A-Line | | | | |
|----------|--------|---------|--------|----------|
| Normal | | Vs | Gray: | Scale |
| Guess T1 | 746 | | 633 | Guess T1 |
| Guess T5 | 927 | | 857 | Guess T5 |
| Total | 1000 | | 1000 | Total |
| TOP 1 | 74.60% | -11.30% | 63.30% | TOP 1 |
| TOP 5 | 92.70% | -7.00% | 85.70% | TOP 5 |

Keras Multifilter

| | | | | MobileNet | | |
|---|--|--|--|---|---|--|
| Seeds | No Filtoro | 69 | 666 | 777 | 911 | 119 |
| Cuesa T1 | No Filters 696 | Filtered 603 | Filtered 600 | Filtered 617 | Filtered 611 | Filtered 618 |
| Guess T1 | 877 | 842 | 840 | 837 | 831 | 838 |
| Guess T5 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Total | 69.60% | 60.30% | 60.00% | 61.70% | 61.10% | 61.80% |
| TOP 1 TOP 5 | 87.70% | 84.20% | 84.00% | 83.70% | 83.10% | 83.80% |
| | 07.7070 | -9.30% | -9.60% | -7.90% | -8.50% | -7.80% |
| Diff TOP 1 | | -3.50% | -3.70% | -4.00% | -4.60% | -3.90% |
| Diff TOP 5 | | -3.30 /0 | -3.7070 | -4.0070 | -4.00 /0 | -3.3070 |
| Seeds | No Filters | 420 | 1308 | 7 | 23 | 9 Filtered |
| Guess T1 | 696 | Filtered 602 | Filtered 618 | Filtered 607 | Filtered 617 | Filtered 606 |
| Guess T5 | 877 | 830 | 839 | 839 | 824 | 835 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 69.60% | 60.20% | 61.80% | 60.70% | 61.70% | 60.60% |
| TOP 5 | 87.70% | 83.00% | 83.90% | 83.90% | 82.40% | 83.50% |
| 10F 5 | 07.7070 | -9.40% | -7.80% | -8.90% | -7.90% | -9.00% |
| Diff TOD 1 | | | -1.00/0 | -0.0070 | -7.5070 | -0.0070 |
| | | -4.70% | -3.80% | -3.80% | -5.30% | -4.20% |
| Diff TOP 5 | | -4.70% | | InceptionV3 | | |
| Diff TOP 5 | No Filters | -4.70% | 666 | InceptionV3 | 911 | 119 |
| Diff TOP 5 Seeds | No Filters | -4.70% | 666 Filtered | InceptionV3 777 Filtered | | |
| Diff TOP 5 Seeds Guess T1 | 754 | -4.70% 69 Filtered 708 | 666 Filtered 701 | InceptionV3 777 Filtered 711 | 911 Filtered | 119 Filtered 689 |
| Seeds Guess T1 Guess T5 | | -4.70% 69 Filtered | 666 Filtered | InceptionV3 777 Filtered | 911 Filtered 702 | 119 Filtered |
| Seeds Guess T1 Guess T5 Total | 754 926 | -4.70% 69 Filtered 708 899 | 666 Filtered 701 899 | InceptionV3 777 Filtered 711 903 | 911 Filtered 702 904 | 119 Filtered 689 908 |
| Seeds Guess T1 Guess T5 Total TOP 1 | 754 926 1000 | -4.70% 69 Filtered 708 899 1000 | 666 Filtered 701 899 1000 | InceptionV3 777 Filtered 711 903 1000 | 911 Filtered 702 904 1000 | 119 Filtered 689 908 1000 |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 | 754 926 1000 75.40% | -4.70% 69 Filtered 708 899 1000 70.80% | 666 Filtered 701 899 1000 70.10% | 777 Filtered 711 903 1000 71.10% | 911 Filtered 702 904 1000 70.20% | 119 Filtered 689 908 1000 68.90% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | 754 926 1000 75.40% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% | 666 Filtered 701 899 1000 70.10% 89.90% | 777 Filtered 711 903 1000 71.10% 90.30% | 911 Filtered 702 904 1000 70.20% 90.40% | 119 Filtered 689 908 1000 68.90% 90.80% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | 754 926 1000 75.40% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% -2.30% | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | 754 926 1000 75.40% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | 754 926 1000 75.40% 92.60% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% -2.30% | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | 754 926 1000 75.40% 92.60% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% | 777 Filtered 771 903 1000 71.10% 90.30% -4.30% -2.30% | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% 23 Filtered | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 | 754 926 1000 75.40% 92.60% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% 420 Filtered 712 | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% 1308 Filtered 705 | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% -2.30% 7 Filtered 7 | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% 23 Filtered 701 | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T1 Guess T5 | 754 926 1000 75.40% 92.60% No Filters 754 926 | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% 420 Filtered 712 905 | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% 1308 Filtered 705 902 | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% -2.30% 7 Filtered 700 898 | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% 23 Filtered 701 907 | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% 9 Filtered 709 895 |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total | 754 926 1000 75.40% 92.60% No Filters 754 926 1000 | 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% 420 Filtered 712 905 1000 | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% 1308 Filtered 705 902 1000 | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% -2.30% 7 Filtered 700 898 1000 | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% 23 Filtered 701 907 1000 | 119 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% 9 Filtered 709 895 1000 |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 | 754 926 1000 75.40% 92.60% No Filters 754 926 1000 75.40% | -4.70% 69 Filtered 708 899 1000 70.80% 89.90% -4.60% -2.70% 420 Filtered 712 905 1000 71.20% | 666 Filtered 701 899 1000 70.10% 89.90% -5.30% -2.70% 1308 Filtered 705 902 1000 70.50% | 777 Filtered 711 903 1000 71.10% 90.30% -4.30% -2.30% 7 Filtered 700 898 1000 70.00% | 911 Filtered 702 904 1000 70.20% 90.40% -5.20% -2.20% 23 Filtered 701 907 1000 70.10% | 9 Filtered 689 908 1000 68.90% 90.80% -6.50% -1.80% 9 Filtered 709 895 1000 70.90% |

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

TOP 1 AVG TOP 5 AVG -8.61% -4.15%

TOP 1 AVG TOP 5 AVG -5.02% -2.40%

| | | | | ResNet152 V2 |) - | |
|------------|------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Seeds | | 69 | 666 | 777 | 911 | 119 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 690 | 611 | 614 | 601 | 607 | 612 |
| Guess T5 | 885 | 824 | 837 | 840 | 828 | 825 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 69.00% | 61.10% | 61.40% | 60.10% | 60.70% | 61.20% |
| TOP 5 | 88.50% | 82.40% | 83.70% | 84.00% | 82.80% | 82.50% |
| Diff TOP 1 | | -7.90% | -7.60% | -8.90% | -8.30% | -7.80% |
| Diff TOP 5 | | -6.10% | -4.80% | -4.50% | -5.70% | -6.00% |
| Seeds | | 420 | 1308 | 7 | 23 | 9 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 690 | 608 | 606 | 604 | 613 | 617 |
| Guess T5 | 885 | 837 | 841 | 833 | 837 | 827 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 69.00% | 60.80% | 60.60% | 60.40% | 61.30% | 61.70% |
| TOP 5 | 88.50% | 83.70% | 84.10% | 83.30% | 83.70% | 82.70% |
| Diff TOP 1 | | -8.20% | -8.40% | -8.60% | -7.70% | -7.30% |
| Diff TOP 5 | | -4.80% | -4.40% | -5.20% | -4.80% | -5.80% |
| Coodo | | CO | 666 | ResNet50 V2 | 011 | 110 |
| Seeds | No Filters | 69 Filtered | 666 Filtered | 777 Filtered | 911 Filtered | 119 Filtered |
| Guess T1 | 651 | 568 | 576 | 575 | 569 | 576 |
| Guess T5 | 866 | 805 | 807 | 798 | 799 | 807 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 65.10% | 56.80% | 57.60% | 57.50% | 56.90% | 57.60% |
| TOP 5 | 86.60% | 80.50% | 80.70% | 79.80% | 79.90% | 80.70% |
| Diff TOP 1 | | -8.30% | -7.50% | -7.60% | -8.20% | -7.50% |
| Diff TOP 5 | | -6.10% | -5.90% | -6.80% | -6.70% | -5.90% |
| Seeds | | 420 | 1308 | 7 | 23 | 9 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 651 | 578 | 558 | 570 | 571 | 578 |
| Guess T5 | 866 | 802 | 795 | 808 | 805 | 795 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 65.10% | 57.80% | 55.80% | 57.00% | 57.10% | 57.80% |
| TOP 5 | 86.60% | 80.20% | 79.50% | 80.80% | 80.50% | 79.50% |
| Diff TOP 1 | | -7.30% | -9.30% | -8.10% | -8.00% | -7.30% |
| | | 0.400/ | 7.400/ | E 000/ | 0.400/ | 7.400/ |

-7.10%

-6.40%

Diff TOP 5

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |

Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG TOP 5 AVG -8.07% -5.21%

TOP 1 AVG TOP 5 AVG -7.91% -6.39%

-6.10%

-7.10%

-5.80%

Keras Multifilter

| | | | | ResNet50 | | |
|---|--|---|---|--|---|---|
| Seeds | A. 5-14 | 69 | 666 | 777 | 911 | 119 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 694 | 553 | 544 | 547 | 539 | 533 |
| Guess T5 | 897 | 781 | 787 | 784 | 785 | 773 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 69.40% | 55.30% | 54.40% | 54.70% | 53.90% | 53.30% |
| TOP 5 | 89.70% | 78.10% | 78.70% | 78.40% | 78.50% | 77.30% |
| Diff TOP 1 | | -14.10% | -15.00% | -14.70% | -15.50% | -16.10% |
| Diff TOP 5 | | -11.60% | -11.00% | -11.30% | -11.20% | -12.40% |
| Seeds | | 420 | 1308 | 7 | 23 | 9 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 694 | 551 | 535 | 538 | 553 | 546 |
| Guess T5 | 897 | 774 | 777 | 784 | 770 | 785 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 69.40% | 55.10% | 53.50% | 53.80% | 55.30% | 54.60% |
| TOP 5 | 89.70% | 77.40% | 77.70% | 78.40% | 77.00% | 78.50% |
| Diff TOP 1 | | -14.30% | -15.90% | -15.60% | -14.10% | -14.80% |
| | | | | | 40 -001 | |
| | | -12.30% | -12.00% | -11.30% | -12.70% | -11.20% |
| Diff TOP 5 | | | | VGG16 | | -11.20% |
| Diff TOP 5 | No Filters | -12.30% 69 Filtered | -12.00% 666 Filtered | | 911 Filtered | -11.20% 119 Filtered |
| Diff TOP 5 Seeds Guess T1 | No Filters 631 | 69 | 666 | VGG16 | 911 | 119 |
| Diff TOP 5 Seeds | | 69 Filtered | 666 Filtered | VGG16 777 Filtered | 911 Filtered | 119 Filtered 522 |
| Seeds Guess T1 Guess T5 | 631 | 69 Filtered 517 | 666 Filtered 527 | VGG16 777 Filtered 528 | 911 Filtered 523 | 119 Filtered 522 753 |
| Seeds Guess T1 Guess T5 Total | 631 856 | 69 Filtered 517 758 | 666 Filtered 527 767 | VGG16 777 Filtered 528 753 | 911 Filtered 523 767 | 119 Filtered 522 753 1000 |
| Seeds Guess T1 Guess T5 Total TOP 1 | 631 856 1000 | 69 Filtered 517 758 1000 | 666 Filtered 527 767 1000 | VGG16 777 Filtered 528 753 1000 | 911 Filtered 523 767 1000 | 119 Filtered 522 753 1000 52.20% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 | 631 856 1000 63.10% | 69 Filtered 517 758 1000 51.70% | 666 Filtered 527 767 1000 52.70% | VGG16 777 Filtered 528 753 1000 52.80% | 911 Filtered 523 767 1000 52.30% | 119 Filtered 522 753 1000 52.20% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | 631 856 1000 63.10% | 69 Filtered 517 758 1000 51.70% 75.80% | 666 Filtered 527 767 1000 52.70% 76.70% | VGG16 777 Filtered 528 753 1000 52.80% 75.30% | 911 Filtered 523 767 1000 52.30% 76.70% | 119 Filtered 522 753 1000 52.20% 75.30% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | 631 856 1000 63.10% | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | 631 856 1000 63.10% | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | 631 856 1000 63.10% 85.60% | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 | 631 856 1000 63.10% 85.60% | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% 420 Filtered | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% 1308 Filtered | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | 631 856 1000 63.10% 85.60% | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% 420 Filtered 520 | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% 1308 Filtered 522 | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% 7 Filtered 527 | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% 23 Filtered 523 | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% |
| Seeds Guess T1 Guess T5 Total TOP 1 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total | 631 856 1000 63.10% 85.60% No Filters 631 856 | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% 420 Filtered 520 768 | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% 1308 Filtered 522 767 | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% 7 Filtered 527 759 | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% 23 Filtered 523 763 | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% 9 Filtered 512 754 1000 |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T1 Guess T5 | 631 856 1000 63.10% 85.60% No Filters 631 856 1000 | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% 420 Filtered 520 768 1000 | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% 1308 Filtered 522 767 1000 | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% 7 Filtered 527 759 1000 | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% 23 Filtered 523 763 1000 | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 5 | 631 856 1000 63.10% 85.60% No Filters 631 856 1000 63.10% | 69 Filtered 517 758 1000 51.70% 75.80% -11.40% -9.80% 420 Filtered 520 768 1000 52.00% | 666 Filtered 527 767 1000 52.70% 76.70% -10.40% -8.90% 1308 Filtered 522 767 1000 52.20% | VGG16 777 Filtered 528 753 1000 52.80% 75.30% -10.30% -10.30% 7 Filtered 527 759 1000 52.70% | 911 Filtered 523 767 1000 52.30% 76.70% -10.80% -8.90% 23 Filtered 523 763 1000 52.30% | 119 Filtered 522 753 1000 52.20% 75.30% -10.90% -10.30% 9 Filtered 512 754 1000 51.20% |

| No Filters | Risultati ottenuti dai modelli con le |
|------------|---------------------------------------|
| | immagini originali del dataset Aline |

Seed applicato alla generazione random dei filtri

Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG TOP 5 AVG

-15.01% -11.70%

TOP 1 AVG TOP 5 AVG

-10.89% -9.51%

Keras Multifilter

53.40%

78.70%

-11.50%

-7.50%

| | | | | VGG19 | | |
|------------|------------|-----------------|------------------|---------------|----------------|---------------|
| Seeds | | 69 | 666 | 777 | 911 | 119 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 649 | 534 | 547 | 533 | 539 | 539 |
| Guess T5 | 862 | 778 | 785 | 781 | 788 | 777 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 64.90% | 53.40% | 54.70% | 53.30% | 53.90% | 53.90% |
| TOP 5 | 86.20% | 77.80% | 78.50% | 78.10% | 78.80% | 77.70% |
| Diff TOP 1 | | -11.50% | -10.20% | -11.60% | -11.00% | -11.00% |
| Diff TOP 5 | | -8.40% | -7.70% | -8.10% | -7.40% | -8.50% |
| Caada | | 420 | 1200 | 7 | 22 | |
| Seeds | No Filters | 420 Filtered | 1308 Filtered | 7 Filtered | 23 Filtered | 9 Filtered |
| Guess T1 | 649 | 533 | 528 | 533 | 534 | 537 |
| Guess T5 | 862 | 777 | 781 | 773 | 787 | 776 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |

52.80%

78.10%

-12.10%

-8.10%

53.30%

77.30%

-11.60%

-8.90%

53.30%

77.70%

-11.60%

-8.50%

64.90%

86.20%

TOP 1

TOP 5

Diff TOP 1

Diff TOP 5

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

TOP 1 AVG TOP 5 AVG -11.33% -8.17%

53.70%

77.60%

-11.20%

-8.60%

| | | | | MobileNet V2 | | |
|---|--|---|---|--|---|--|
| Seeds | | 69 | 666 | 777 | 911 | 119 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 711 | 584 | 603 | 604 | 592 | 617 |
| Guess T5 | 909 | 845 | 836 | 836 | 847 | 846 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 71.10% | 58.40% | 60.30% | 60.40% | 59.20% | 61.70% |
| TOP 5 | 90.90% | 84.50% | 83.60% | 83.60% | 84.70% | 84.60% |
| Diff TOP 1 | | -12.70% | -10.80% | -10.70% | -11.90% | -9.40% |
| Diff TOP 5 | | -6.40% | -7.30% | -7.30% | -6.20% | -6.30% |
| Seeds | | 420 | 1308 | 7 | 23 | 9 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 711 | 619 | 605 | 598 | 598 | 594 |
| Guess T5 | 909 | 846 | 837 | 837 | 843 | 834 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 71.10% | 61.90% | 60.50% | 59.80% | 59.80% | 59.40% |
| TOP 5 | 90.90% | 84.60% | 83.70% | 83.70% | 84.30% | 83.40% |
| | | | | | | |
| Diff TOP 1 | | -9.20% | -10.60% | -11.30% | -11.30% | -11.70% |
| | | -9.20% -6.30% | -10.60% -7.20% | -11.30% -7.20% | -11.30% -6.60% | |
| Diff TOP 5 | | -6.30% | -7.20% | -7.20% Inception V3 | -6.60% | -7.50% |
| Diff TOP 5 | No Filters | | | -7.20% | $\overline{}$ | -11.70% -7.50% 119 Filtered |
| Diff TOP 5 Seeds | | -6.30% | -7.20% | Inception V3 | -6.60% 911 | -7.50% 119 |
| Diff TOP 5 Seeds Guess T1 | No Filters | -6.30% 69 Filtered | -7.20% 666 Filtered | Inception V3 777 Filtered | -6.60% 911 Filtered | -7.50% 119 Filtered 735 |
| Seeds Guess T1 Guess T5 | No Filters 781 | -6.30% 69 Filtered 725 | -7.20% 666 Filtered 728 | Inception V3 777 Filtered 721 | 911 Filtered 728 | -7.50% 119 Filtered 735 918 |
| Seeds Guess T1 Guess T5 Total | No Filters 781 939 | -6.30% 69 Filtered 725 921 | -7.20% 666 Filtered 728 915 | -7.20% Inception V3 777 Filtered 721 914 | 911 Filtered 728 918 | -7.50% 119 Filtered 735 918 1000 |
| Seeds Guess T1 Guess T5 Total TOP 1 | No Filters 781 939 1000 | -6.30% 69 Filtered 725 921 1000 | -7.20% 666 Filtered 728 915 1000 | -7.20% Inception V3 777 Filtered 721 914 1000 | 911 Filtered 728 918 1000 | -7.50% 119 Filtered 735 918 1000 73.50% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 | No Filters 781 939 1000 78.10% | -6.30% 69 Filtered 725 921 1000 72.50% | -7.20% 666 Filtered 728 915 1000 72.80% | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% | 911 Filtered 728 918 1000 72.80% | 119 Filtered 735 918 1000 73.50% 91.80% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | No Filters 781 939 1000 78.10% | 69 Filtered 725 921 1000 72.50% 92.10% | 666 Filtered 728 915 1000 72.80% 91.50% | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% | 911 Filtered 728 918 1000 72.80% 91.80% | -7.50% 119 Filtered |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | No Filters 781 939 1000 78.10% | -6.30% 69 Filtered 725 921 1000 72.50% 92.10% -5.60% -1.80% | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% -2.40% | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% -6.00% -2.50% | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% -2.10% | -7.50% 119 Filtered 735 918 1000 73.50% 91.80% -4.60% -2.10% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | No Filters 781 939 1000 78.10% | -6.30% 69 Filtered 725 921 1000 72.50% 92.10% -5.60% | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% -6.00% | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% | -7.50% 119 Filtered 735 918 1000 73.50% 91.80% -4.60% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | No Filters 781 939 1000 78.10% 93.90% | -6.30% 69 Filtered 725 921 1000 72.50% 92.10% -5.60% -1.80% | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% -2.40% | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% -6.00% -2.50% | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% -2.10% | -7.50% 119 Filtered 735 918 1000 73.50% 91.80% -4.60% -2.10% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 | No Filters 781 939 1000 78.10% 93.90% | -6.30% Filtered 725 921 1000 72.50% 92.10% -5.60% -1.80% | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% -2.40% | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% -6.00% -2.50% 7 Filtered | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% -2.10% | 119 Filtered 735 918 1000 73.50% 91.80% -4.60% -2.10% |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | No Filters 781 939 1000 78.10% 93.90% | -6.30% 69 Filtered 725 921 1000 72.50% 92.10% -5.60% -1.80% | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% -2.40% 1308 Filtered 729 | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% -6.00% -2.50% 7 Filtered 731 | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% -2.10% | 119 Filtered 735 918 1000 73.50% 91.80% -4.60% -2.10% 9 Filtered 727 921 |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total | No Filters 781 939 1000 78.10% 93.90% No Filters 781 939 | 69 Filtered 725 921 1000 72.50% 92.10% -5.60% -1.80% 420 Filtered 722 918 | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% -2.40% 1308 Filtered 729 922 | -7.20% Inception V3 777 Filtered 721 914 1000 72.10% 91.40% -6.00% -2.50% 7 Filtered 731 912 | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% -2.10% 23 Filtered 732 916 | 119 Filtered 735 918 1000 73.50% 91.80% -4.60% -2.10% 9 Filtered 727 921 1000 |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T1 Guess T5 | No Filters 781 939 1000 78.10% 93.90% No Filters 781 939 1000 | 69 Filtered 725 921 1000 72.50% 92.10% -5.60% -1.80% 420 Filtered 722 918 1000 | -7.20% 666 Filtered 728 915 1000 72.80% 91.50% -5.30% -2.40% 1308 Filtered 729 922 1000 | 7 Filtered 721 914 1000 72.10% 91.40% -6.00% -2.50% 7 Filtered 731 912 1000 | 911 Filtered 728 918 1000 72.80% 91.80% -5.30% -2.10% 23 Filtered 732 916 1000 | 119 Filtered 735 918 1000 73.50% 91.80% -4.60% -2.10% |

-1.70%

-2.10%

Diff TOP 5

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

TOP 1 AVG TOP 5 AVG -10.96% -6.83%

TOP 1 AVG TOP 5 AVG -5.32% -2.15%

-2.30%

-1.80%

-2.70%

| | | ResNet152 | | | | | | | |
|---|---------------------------------------|---|---|---|---|--|--|--|--|
| Seeds | No Filters | 69 Filtered | 666 Filtered | 777 Filtered | 911 Filtered | 119 Filtered | | | |
| Guess T1 | 774 | 682 | 688 | 694 | 687 | 690 | | | |
| Guess T5 | 947 | 914 | 894 | 903 | 907 | 900 | | | |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| TOP 1 | 77.40% | 68.20% | 68.80% | 69.40% | 68.70% | 69.00% | | | |
| TOP 5 | 94.70% | 91.40% | 89.40% | 90.30% | 90.70% | 90.00% | | | |
| Diff TOP 1 | | -9.20% | -8.60% | -8.00% | -8.70% | -8.40% | | | |
| Diff TOP 5 | | -3.30% | -5.30% | -4.40% | -4.00% | -4.70% | | | |
| Seeds | | 420 | 1308 | 7 | 23 | 9 | | | |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered | | | |
| Guess T1 | 774 | 691 | 688 | 689 | 691 | 692 | | | |
| Guess T5 | 947 | 906 | 906 | 904 | 909 | 905 | | | |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| TOP 1 | 77.40% | 69.10% | 68.80% | 68.90% | 69.10% | 69.20% | | | |
| | 94.70% | 90.60% | 90.60% | 90.40% | 90.90% | 90.50% | | | |
| TOP 5 | 34.7070 | | | | | | | | |
| | 34.7070 | -8.30% | -8.60% | -8.50% | -8.30% | -8.20% | | | |
| Diff TOP 1 | 34.1070 | -8.30% -4.10% | -8.60% -4.10% | -8.50% -4.30% | -8.30% -3.80% | | | | |
| Diff TOP 1 Diff TOP 5 | 34.1070 | -4.10% | -4.10% | -4.30% AlexNet | -3.80% | -4.20% | | | |
| Diff TOP 1 Diff TOP 5 | | -4.10 % | -4.10% 666 | -4.30% AlexNet | -3.80% 911 | -4.20% 119 | | | |
| Diff TOP 5 Diff TOP 5 Seeds | No Filters | -4.10% 69 Filtered | -4.10% | -4.30% AlexNet | -3.80% | -4.20% 119 Filtered | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 | | -4.10 % | -4.10% 666 Filtered | -4.30% AlexNet | -3.80% 911 Filtered | -4.20% 119 Filtered 428 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 | No Filters 577 | -4.10% 69 Filtered 428 | -4.10% 666 Filtered 421 | -4.30% AlexNet 777 Filtered 418 | 911 Filtered 413 | 119 Filtered 428 667 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total | No Filters 577 802 1000 | -4.10% 69 Filtered 428 668 1000 | -4.10% 666 Filtered 421 664 1000 | -4.30% AlexNet 777 Filtered 418 665 1000 | 911 Filtered 413 665 1000 | -4.20% 119 Filtered 428 667 1000 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 | No Filters 577 802 | -4.10% 69 Filtered 428 668 | -4.10% 666 Filtered 421 664 | -4.30% AlexNet 777 Filtered 418 665 | 911 Filtered 413 665 | 119 Filtered 428 667 1000 42.80% | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 | No Filters 577 802 1000 57.70% | 69 Filtered 428 668 1000 42.80% | 666 Filtered 421 664 1000 42.10% | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% | 911 Filtered 413 665 1000 41.30% | 119 Filtered 428 667 1000 42.80% 66.70% | | | |
| TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | No Filters 577 802 1000 57.70% | 69 Filtered 428 668 1000 42.80% 66.80% | 666 Filtered 421 664 1000 42.10% 66.40% | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% | 911 Filtered 413 665 1000 41.30% 66.50% | -4.20% 119 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | No Filters 577 802 1000 57.70% | -4.10% 69 Filtered 428 668 1000 42.80% 66.80% -14.90% -13.40% | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% -13.80% | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% -13.70% | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% -13.70% | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% -13.50% | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | No Filters 577 802 1000 57.70% | -4.10% 69 Filtered 428 668 1000 42.80% 66.80% -14.90% | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | No Filters 577 802 1000 57.70% 80.20% | -4.10% 69 Filtered 428 668 1000 42.80% 66.80% -14.90% -13.40% | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% -13.80% | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% -13.70% | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% -13.70% | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% -13.50% | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | No Filters | -4.10% 69 Filtered 428 668 1000 42.80% 66.80% -14.90% -13.40% 420 Filtered | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% -13.80% 1308 Filtered | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% -13.70% 7 Filtered | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% -13.70% | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% -13.50% | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 | No Filters | -4.10% 69 Filtered 428 668 1000 42.80% 66.80% -14.90% -13.40% 420 Filtered 422 | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% -13.80% 1308 Filtered 413 | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% -13.70% 7 Filtered 423 | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% -13.70% | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% -13.50% 9 Filtered 415 648 | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 5 Diff TOP 5 Seeds Guess T1 | No Filters | -4.10% 69 Filtered 428 668 1000 42.80% 66.80% -14.90% -13.40% 420 Filtered 422 667 | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% -13.80% 1308 Filtered 413 657 | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% -13.70% 7 Filtered 423 659 | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% -13.70% 23 Filtered 419 668 | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% -13.50% 9 Filtered 415 648 1000 | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 Diff TOP 5 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 5 Total | No Filters | -4.10% Filtered 428 668 1000 42.80% 66.80% -14.90% -13.40% 420 Filtered 422 667 1000 | -4.10% 666 Filtered 421 664 1000 42.10% 66.40% -15.60% -13.80% 1308 Filtered 413 657 1000 | -4.30% AlexNet 777 Filtered 418 665 1000 41.80% 66.50% -15.90% -13.70% 7 Filtered 423 659 1000 | 911 Filtered 413 665 1000 41.30% 66.50% -16.40% -13.70% 23 Filtered 419 668 1000 | 119 Filtered 428 667 1000 42.80% 66.70% -14.90% -13.50% | | | |

-14.50%

-13.50%

Diff TOP 5

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

TOP 1 AVG TOP 5 AVG -8.48% -4.22%

TOP 1 AVG TOP 5 AVG -15.70% -13.92%

-13.40%

-15.40%

-14.30%

| | | ResNet50 | | | | | | | |
|---|--|--|--|--|--|---|--|--|--|
| Seeds | No Filters | 69 Filtered | 666 Filtered | 777 Filtered | 911 Filtered | 119 Filtered | | | |
| Guess T1 | 763 | 665 | 663 | 667 | 669 | 662 | | | |
| Guess T5 | 934 | 885 | 870 | 880 | 880 | 878 | | | |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| TOP 1 | 76.30% | 66.50% | 66.30% | 66.70% | 66.90% | 66.20% | | | |
| TOP 5 | 93.40% | 88.50% | 87.00% | 88.00% | 88.00% | 87.80% | | | |
| Diff TOP 1 | | -9.80% | -10.00% | -9.60% | -9.40% | -10.10% | | | |
| Diff TOP 5 | | -4.90% | -6.40% | -5.40% | -5.40% | -5.60% | | | |
| Seeds | | 420 | 1308 | 7 | 23 | 9 | | | |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered | | | |
| Guess T1 | 763 | 658 | 673 | 663 | 661 | 667 | | | |
| Guess T5 | 934 | 883 | 882 | 887 | 880 | 884 | | | |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| TOP 1 | 76.30% | 65.80% | 67.30% | 66.30% | 66.10% | 66.70% | | | |
| TOD 5 | 93.40% | 88.30% | 88.20% | 88.70% | 88.00% | 88.40% | | | |
| TOP 5 | 00.1070 | | | | | | | | |
| | 33.1070 | -10.50% | -9.00% | -10.00% | -10.20% | -9.60% | | | |
| Diff TOP 1 | | -10.50% -5.10% | -9.00% -5.20% | -10.00% -4.70% | -10.20% -5.40% | -9.60% -5.00% | | | |
| Diff TOP 1 Diff TOP 5 | 0011070 | -5.10% | -5.20% | -4.70% VGG16 | -5.40% | -5.00% | | | |
| Diff TOP 1 Diff TOP 5 | | -5.10 % | -5.20% | -4.70% VGG16 | - 5.40 % | -5.00% 119 | | | |
| Diff TOP 5 Diff TOP 5 Seeds | No Filters | -5.10% 69 Filtered | -5.20% 666 Filtered | -4.70% VGG16 777 Filtered | -5.40% 911 Filtered | -5.00% 119 Filtered | | | |
| Diff TOP 5 Seeds Guess T1 | No Filters | -5.10% 69 Filtered 606 | -5.20% 666 Filtered 610 | -4.70% VGG16 777 Filtered 617 | 911 Filtered 622 | -5.00% 119 Filtered 617 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 | No Filters 722 910 | -5.10% 69 Filtered 606 846 | -5.20% 666 Filtered 610 845 | -4.70% VGG16 777 Filtered 617 843 | 911 Filtered 622 848 | 119 Filtered 617 845 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total | No Filters 722 910 1000 | 69 Filtered 606 846 1000 | 666 Filtered 610 845 1000 | -4.70% VGG16 777 Filtered 617 843 1000 | 911 Filtered 622 848 1000 | -5.00% 119 Filtered 617 845 1000 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 | No Filters 722 910 | -5.10% 69 Filtered 606 846 | -5.20% 666 Filtered 610 845 | -4.70% VGG16 777 Filtered 617 843 | 911 Filtered 622 848 | 119 Filtered 617 845 | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 | No Filters 722 910 1000 72.20% | 69 Filtered 606 846 1000 60.60% | 666 Filtered 610 845 1000 61.00% 84.50% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% | 911 Filtered 622 848 1000 62.20% | 119 Filtered 617 845 1000 61.70% | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | No Filters 722 910 1000 72.20% | 69 Filtered 606 846 1000 60.60% 84.60% | 666 Filtered 610 845 1000 61.00% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% | 911 Filtered 622 848 1000 62.20% 84.80% | 119 Filtered 617 845 1000 61.70% 84.50% | | | |
| TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | No Filters 722 910 1000 72.20% | 69 Filtered 606 846 1000 60.60% 84.60% -11.60% -6.40% | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% -6.50% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% -6.70% | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% -6.20% | 119 Filtered 617 845 1000 61.70% 84.50% -10.50% | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 | No Filters 722 910 1000 72.20% | 69 Filtered 606 846 1000 60.60% 84.60% -11.60% | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% | 119 Filtered 617 845 1000 61.70% 84.50% -10.50% | | | |
| Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 | No Filters 722 910 1000 72.20% 91.00% | 69 Filtered 606 846 1000 60.60% 84.60% -11.60% -6.40% | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% -6.50% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% -6.70% | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% -6.20% | -5.00% 119 Filtered 617 845 1000 61.70% 84.50% -10.50% -6.50% | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds | No Filters 722 910 1000 72.20% 91.00% | -5.10% 69 Filtered 606 846 1000 60.60% 84.60% -11.60% -6.40% 420 Filtered | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% -6.50% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% -6.70% | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% -6.20% | 119 Filtered 617 845 1000 61.70% 84.50% -10.50% -6.50% | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 5 Diff TOP 5 Seeds Guess T1 | No Filters 722 910 1000 72.20% 91.00% No Filters 722 | 69 Filtered 606 846 1000 60.60% 84.60% -11.60% -6.40% 420 Filtered 615 | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% -6.50% | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% -6.70% 7 Filtered 615 | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% -6.20% 23 Filtered 609 | 119 Filtered 617 845 1000 61.70% 84.50% -10.50% -6.50% | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 TOP 5 Diff TOP 1 Diff TOP 5 Seeds Guess T1 Guess T5 | No Filters 722 910 1000 72.20% 91.00% No Filters 722 910 | 69 Filtered 606 846 1000 60.60% 84.60% -11.60% -6.40% 420 Filtered 615 841 | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% -6.50% 1308 Filtered 608 838 | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% -6.70% 7 Filtered 615 849 | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% -6.20% 23 Filtered 609 846 | 119 Filtered 617 845 1000 61.70% 84.50% -10.50% -6.50% 9 Filtered 602 845 | | | |
| Seeds Guess T1 Guess T5 Total TOP 1 Diff TOP 5 Diff TOP 5 Diff TOP 5 Seeds Guess T1 Guess T5 Total TOP 5 Total TOP 5 Total TOP 5 Diff TOP 5 Total Top 5 Total | No Filters 722 910 1000 72.20% 91.00% No Filters 722 910 1000 | 69 Filtered 606 846 1000 60.60% 84.60% -11.60% -6.40% 420 Filtered 615 841 1000 | 666 Filtered 610 845 1000 61.00% 84.50% -11.20% -6.50% 1308 Filtered 608 838 1000 | -4.70% VGG16 777 Filtered 617 843 1000 61.70% 84.30% -10.50% -6.70% 7 Filtered 615 849 1000 | 911 Filtered 622 848 1000 62.20% 84.80% -10.00% -6.20% 23 Filtered 609 846 1000 | 119 Filtered 617 845 1000 61.70% 84.50% -10.50% -6.50% 9 Filtered 602 845 1000 | | | |

-7.20%

-6.90%

Diff TOP 5

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

TOP 1 AVG TOP 5 AVG -9.82% -5.31%

TOP 1 AVG TOP 5 AVG -10.99% -6.54%

-6.40%

-6.50%

-6.10%

| | | | | VGG19 | | |
|------------|------------|-----------------|------------------|-----------------|-----------------|-----------------|
| Seeds | No Filters | 69 Filtered | 666 Filtered | 777 Filtered | 911 Filtered | 119 Filtered |
| Guess T1 | 730 | 621 | 618 | 630 | 618 | 631 |
| Guess T5 | 908 | 874 | 850 | 862 | 850 | 850 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 73.00% | 62.10% | 61.80% | 63.00% | 61.80% | 63.10% |
| TOP 5 | 90.80% | 87.40% | 85.00% | 86.20% | 85.00% | 85.00% |
| Diff TOP 1 | , | -10.90% | -11.20% | -10.00% | -11.20% | -9.90% |
| Diff TOP 5 | | -3.40% | -5.80% | -4.60% | -5.80% | -5.80% |
| Seeds | No Filters | 420 Filtered | 1308 Filtered | 7 Filtered | 23 Filtered | 9 Filtered |
| Guess T1 | 730 | 633 | 628 | 639 | 629 | 620 |
| Guess T5 | 908 | 857 | 853 | 854 | 866 | 854 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 73.00% | 63.30% | 62.80% | 63.90% | 62.90% | 62.00% |
| TOP 5 | 90.80% | 85.70% | 85.30% | 85.40% | 86.60% | 85.40% |
| Diff TOP 1 | | -9.70% | -10.20% | -9.10% | -10.10% | -11.00% |
| Diff TOP 5 | | -5.10% | -5.50% | -5.40% | -4.20% | -5.40% |
| Seeds | No Filters | 69 | 666 | SqueezeNet 1. | 911 Filtered | 119 |
| Guess T1 | 612 | Filtered 450 | Filtered 468 | Filtered 457 | 457 | Filtered 458 |
| Guess T5 | 817 | 706 | 697 | 698 | 698 | 708 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 61.20% | 45.00% | 46.80% | 45.70% | 45.70% | 45.80% |
| TOP 5 | 81.70% | 70.60% | 69.70% | 69.80% | 69.80% | 70.80% |
| Diff TOP 1 | | -16.20% | -14.40% | -15.50% | -15.50% | -15.40% |
| Diff TOP 5 | | -11.10% | -12.00% | -11.90% | -11.90% | -10.90% |
| Seeds | | 420 | 1308 | 7 | 23 | 9 |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered |
| Guess T1 | 612 | 459 | 447 | 443 | 459 | 463 |
| Guess T5 | 817 | 703 | 701 | 712 | 709 | 695 |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| TOP 1 | 61.20% | 45.90% | 44.70% | 44.30% | 45.90% | 46.30% |
| TOP 5 | 81.70% | 70.30% | 70.10% | 71.20% | 70.90% | 69.50% |
| Diff TOP 1 | | -15.30% | -16.50% | -16.90% | -15.30% | -14.90% |
| Diff TOP 5 | | -11.40% | -11.60% | -10.50% | -10.80% | -12.20% |

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

TOP 1 AVG TOP 5 AVG -5.10% -10.33%

TOP 1 AVG TOP 5 AVG -11.43% -15.59%

| | | | VGG19 BN | | | | | | | | |
|------------|------------|----------|----------|----------|----------|----------|--|--|--|--|--|
| Seeds | | 69 | 666 | 777 | 911 | 119 | | | | | |
| | No Filters | Filtered | Filtered | Filtered | Filtered | Filtered | | | | | |
| Guess T1 | 746 | 667 | 666 | 655 | 658 | 657 | | | | | |
| Guess T5 | 927 | 886 | 882 | 881 | 880 | 878 | | | | | |
| Total | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | |
| TOP 1 | 74.60% | 66.70% | 66.60% | 65.50% | 65.80% | 65.70% | | | | | |
| TOP 5 | 92.70% | 88.60% | 88.20% | 88.10% | 88.00% | 87.80% | | | | | |
| Diff TOP 1 | | -7.90% | -8.00% | -9.10% | -8.80% | -8.90% | | | | | |
| Diff TOP 5 | | -4.10% | -4.50% | -4.60% | -4.70% | -4.90% | | | | | |

| No Filters | Risultati ottenuti dai modelli con le immagini originali del dataset Aline |
|------------|--|
| 1234 | Seed applicato alla generazione random dei filtri |
| Filtered | Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego. |

| Seeds | | 420 | | 1308 | | 7 | | 23 | | 9 |
|------------|------------|----------|----|---------|----------|--------|---------|--------|----------|--------|
| | No Filters | Filtered | Fi | iltered | Filtered | | Filtere | d | Filtered | |
| Guess T1 | 746 | 664 | | 665 | | 659 | | 670 | | 650 |
| Guess T5 | 927 | 873 | | 887 | | 885 | | 886 | | 878 |
| Total | 1000 | 1000 | | 1000 | | 1000 | | 1000 | | 1000 |
| TOP 1 | 74.60% | 66.40% | | 66.50% | | 65.90% | | 67.00% | | 65.00% |
| TOP 5 | 92.70% | 87.30% | | 88.70% | | 88.50% | | 88.60% | | 87.80% |
| Diff TOP 1 | | -8.20% | | -8.10% | | -8.70% | | -7.60% | | -9.60% |
| Diff TOP 5 | | -5.40% | | -4.00% | | -4.20% | | -4.10% | | -4.90% |

TOP 1 AVG TOP 5 AVG -8.49% -4.54%