Augmenting Softmax Information for Selective Classification with Out-of-Distribution Data Supplemental Material

Guoxuan Xia and Christos-Savvas Bouganis

Imperial College London {g.xia21,christos-savvas.bouganis}@imperial.ac.uk

A Experimental Details

We present detailed information about our experimental setup. Our code is available at https://github.com/Guoxoug/SIRC.

A.1 Models and Training

For the main results we train ResNet-50 [4] using the default hyperparameters found in PyTorch's examples.¹ We train on ImageNet-200 for 90 epochs with a batch size of 256. Stochastic gradient descent is used with a weight decay of 10^{-4} , a momentum of 0.9 and an initial learning rate of 0.1 that steps down by a factor of 10 at epochs 30 and 60. Images are augmented using RandomResizedCrop and RandomHorizontalFlip. MobileNetV2 [18] uses the same setting, but with an initial learning rate of 0.05. DenseNet-121 is trained with the same settings are ResNet-50 but with Nesterov momentum as per [8]. We perform 5 independent training runs for each architecture, with random seeds $\{1, ..., 5\}$.

Additionally, we also test on two pre-trained ImageNet-1k models. We use ResNetV2-101 from Google's Big Transfer² [13], specifically BiT-S-R101x1, and DenseNet-121 provided by PyTorch.³. Note that the BiT model takes 480×480 images as input, whereas all other models take standard ImageNet-scale 224×224 images. Note that for evaluating these models we exclude Near-ImageNet-200 and Caltech-45 due to class overlap with ImageNet-1k.

A.2 ImageNet-Scale Datasets

Figure 1 shows a number of random examples from each dataset introduced in the main paper, alongside the number of samples in said dataset. Below we describe the methodology for constructing Colonoscopy and Noise. For the remaining datasets please refer to their original papers for details [7, 10–12, 19]. We note that there is a slight discrepancy between the number of samples reported in [12]

¹ https://github.com/pytorch/examples/tree/main/imagenet

² https://github.com/google-research/big_transfer

³ https://pytorch.org/vision/stable/models.html

for ImageNet-200 and in the authors' provided datasets,⁴ but we do not believe this affects the validity of our results.

Noise We randomly generate 10000 square images. All samples are generated independently. Within each image, each value (in space and RGB) is sampled from the same gaussian distribution, with mean 0.5. The standard deviation of said gaussian differs between images. These in turn are generated by sampling from a unit gaussian and squaring the samples. Pixel values are then clipped to be in [0, 1] and mapped to 8-bit integers. The widths of each image are sampled uniformly from $\{2, ..., 256\}$, and the images are all scaled to 256×256 using the lanczos interpolation method in PIL.⁵ The resulting data thus varies in both scale and contrast (see Fig. 1).

Colonoscopy We separate out frames as individual images from videos provided in [16].⁶ We download the first 10 narrow band imaging (NBI) videos in each class of lesion (hyperplasic, serrated, adenoma) and extract each frame as an individual image. Although the data is not independent in this case, we treat it as such for the purposes of our investigation.

A.3 Confidence Scores

Below we detail all confidence scores S implemented and evaluated in our investigation. There are additional approaches that were omitted from the main paper for the sake of brevity.

- SIRC: for a description of the score see the main paper. We use the whole of the ImageNet-200 *training* set to determine the values of μ_{S_2}, σ_{S_2} . For ImageNet-1k we randomly sample 250,000 images from the training set. Note that for all following methods that require ID data to find parameters, we use the same ID data as for SIRC. We investigate combinations of S_1, S_2 from the cartesian product {MSP,DOCTOR, \mathcal{H} }×{||z||₁,Residual}.
- Maximum Softmax Probability (MSP)[6]: a baseline score that takes the max value from the softmax $\pi_{\max} = \max_k \pi_k$.
- DOCTOR [3]: the original paper does not directly present it as such, but the confidence score is equivalent to $||\pi||_2$.
- Softmax Entropy (\mathcal{H}) : measures softmax uncertainty, $\mathcal{H}[\boldsymbol{\pi}] = -\sum_k \pi_k \log \pi_k$. We use $S = -\mathcal{H}[\boldsymbol{\pi}]$ to change it to a measure of confidence.
- l_1 -norm of the features: used in Gradnorm [9], $||\boldsymbol{z}||_1$.
- Residual: used in ViM [9], this score measures the component of the feature vector that is outside of a principal subspace defined using ID data, $||\boldsymbol{z}^{P^{\perp}}||_2$. We follow [19] in setting the dimensionality of the subspace to 1000 if the

⁴ https://github.com/daintlab/unknown-detection-benchmarks

⁵ https://pillow.readthedocs.io/en/stable/_modules/PIL/Image.html#Image. resize

⁶ http://www.depeca.uah.es/colonoscopy_dataset/



Fig.1. Random examples from each ImageNet-scale dataset, with the $\# {\rm samples}$ in each.

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Fig. 2. Visualisations of different evaluation metrics for SCOD. We aim to minimise risk over different selection thresholds t. Left: Risk-Coverage curve (coverage is the proportion of all data accepted). We aggregate performance over t by taking the area under the curve. The oracle represents perfect separation of OOD,ID \times |ID \checkmark . Right: Risk-Recall curve. We consider both the area under the curve as well as risk@recall=0.95.

dimensionality of z, L > 1500 and 512 otherwise. Like Entropy, we use the negative of the score $S = -||z^{P^{\perp}}||_2$ as this score is meant to be higher for OOD data. Please refer to Wang et al. [19]'s paper for full details.

- Max Logit [5]: Max Logit is similar to MSP, but the score is taken from the logits before the softmax $v_{\text{max}} = \max_k v_k$.
- Energy [15]: this score aggregates over all logit values as $\log \sum_k \exp v_k$.
- Gradnorm [9]: although this score was originally motivated by gradients, we can view it simply as the combination of two scores, $C = ||\boldsymbol{\pi} \mathbf{1}/K||_1 ||\boldsymbol{z}||_1$.
- ViM [19]: this linearly combines Energy and Residual, $C = \log \sum_k \exp v_k c ||\boldsymbol{z}^{P^{\perp}}||_2$. The parameter *c* is given by the average value of Max Logit divided by the average value of Residual on ID data, which scales the importance of Residual to be similar to that of Energy in the combination.
- Mahalanobis [14]: this score involves building a classwise gaussian mixture model over the features with tied covariance matrix. The confidence is then calculated as $-\min_k(\boldsymbol{z}-\boldsymbol{\mu}_k)^T \tilde{\boldsymbol{\Sigma}}(\boldsymbol{z}-\boldsymbol{\mu}_k)$. We use the approach in [1, 19] where only the final layer features are considered.

A.4 Evaluation Metrics

Other than the metrics specified in the main paper, we additionally use Area Under the Risk-Coverage Curve (AURC) \downarrow , from [2, 12]. It aggregates risk over all values of *coverage*, which is the proportion of all input data accepted. For AURC their exists an oracle curve, where OOD and ID \varkappa are perfectly disjoint from ID \checkmark . AURC can be reduced either by lowering the oracle curve by reducing the number of ID \varkappa (increasing baseline accuracy of f) or by better separating OOD,ID \varkappa |ID \checkmark (better choice of g) and so bringing the curve closer to the oracle. Thus the metric is suitable for both training based, and post-hoc approaches. Fig. 2 illustrates graphically some of the metrics we use to evaluate SCOD.

B Additional Results

We provide more complete versions of the results presented in the main paper across all architectures and datasets.

B.1 AUROC and FPR@95

We present results across all post-hoc confidence scores in Appendix A.3 for all architectures. We also include mean ± 2 std. for experiments with multiple training runs. SIRC performs as expected in all cases – a negligible reduction in $ID \checkmark$ ID \checkmark in exchange for a meaningful uplift in OOD ID \checkmark compared to only using S_1 . DOCTOR in general performs somewhere in between MSP and $-\mathcal{H}$, both individually and when used in SIRC, so we relegate it to the appendix. We note that Residual and Mahalanobis perform much better only for ResNetV2-101 (these results are inline with [19]). This may be due to the fact that BiT uses Weight Standardisation and Group Normalisation when training, rather than standard Batch Normalisation. Mukhoti et al. [17] show that limiting the Lipschitz constant of the network during training improves the OOD detection performance of gaussian mixture models, which may be also what is occurring in this example. The Mahalanobis detector performs poorly outside ResNetV2-101 otherwise. There is non-negligible variance between training runs on a number of OOD datasets, highlighting the need to perform multiple training runs. Some datasets (e.g. Noise, Colorectal, SVHN), have especially high variation.

B.2 Varying α and β

We plot performance under varying α and β for all 3 ImageNet-200 architectures (Figs. 3 to 5). We also present the mean±std. The ability of SIRC to perform consistently better than the baseline generalises across the 3 different CNN architectures. We note that differences in AURC are harder to distinguish, due to the metric considering the proportion of all input data accepted, rather than just the recall of ID \checkmark . The behaviour, however, is similar to AURR in terms of relative performance to the baseline, so we omit AURC from the main results.

B.3 SCOD vs OOD Detection

We plot the change in $\text{\%FPR@95}\downarrow$ relative to the MSP baseline for all architectures and confidence scores (Figs. 6 to 10). The behaviour is as discussed in the main paper, with methods designed for OOD detection achieving gains over the baseline for OOD detection by sacrificing their ability to separate ID \boldsymbol{X} |ID $\boldsymbol{\checkmark}$.

B.4 Plotting S_2 against S_1

We plot different SIRC combinations on the S_1, S_2 -plane for different experimental configurations (Figs. 11 to 14). If there are multiple training runs, we plot **Table 1.** Full %AUROC and %FPR@95 results for all models trained on ImageNet-200. We show the mean ± 2 std. over 5 independent training runs. **Bold** indicates best performance, <u>underline</u> 2nd or 3rd best.

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 | 70 F F R 5095, | , %AUROC
 | %FFR3951 | . %AUROC
 | %FFRM954 | . %AUROC
 | %FFR.954 |
|

 | $(MSP, \boldsymbol{z} _1)$
$(MSD D \dots)$

 | 90.34 ±0.2

 | 52.70 ±3.2

 | 91.51 | 40.27
 | 85.56 ±0.6
 | 59.76 ±2.9 | 91.36 ± 0.6
 | 41.44 ±3.0 | 92.28 ±0.5
 | 41.36 ± 2.8
20.05 ± 2.8 | 94.80 ±0.3
 | 29.60 ±1.3 |
|

 | DR z 1)

 | 90.43 ±0.3

 | $\frac{52.10 \pm 3.0}{52.54 \pm 3.4}$

 | 92.30
91.83 | 34.98
 | 85.52 ±0.6
 | 58.05 ± 2.4 | 91.19 ± 0.6
91.67 ± 0.5
 | 42.27 ± 3.2
37.81 ± 2.7 | 92.57 ± 0.6
92.59 ± 0.4
 | 39.93 ± 3.3
37.82 ± 2.6 | 94.10 ± 0.3
95.18 ± 0.3
 | 25 78 ±1 7 |
|

 | (DR,Res.)

 | 90.40 ±0.4

 | 51.81 ±2.9

 | 92.83 | 31.76
 | 85.62 ±0.6
 | 58.49 ±3.2 | 91.44 ± 0.6
 | 38.92 ± 3.2 | 92.87 ±0.6
 | 36.36 ±3.6 | 94.32 ±0.4
 | $\frac{20.10 \pm 1.1}{30.05 \pm 3.2}$ |
| _

 | $(-\mathcal{H}, z _1)$

 | 90.00 ± 0.4

 | 54.26 ± 2.7

 | 92.24 | 35.85
 | 85.88 ± 0.6
 | 58.50 ± 3.3 | 92.19 ± 0.5
 | 36.08 ± 2.5 | 92.87 ± 0.4
 | 37.83 ± 3.3 | 95.38 ± 0.2
 | 25.09 ±1.9 |
| 9.0

 | $(-\mathcal{H}, \text{Res.})$

 | 90.13 ± 0.4

 | 54.01 ± 3.2

 | 93.36 | 30.05
 | 85.85 ± 0.6
 | 58.93 ± 3.3 | 92.11 ± 0.5
 | 36.76 ± 3.0 | 93.25 ± 0.6
 | 36.36 ± 4.5 | $94.82 \ \pm 0.3$
 | 28.51 ± 3.4 |
| 85

 | MSP

 | 90.41 ± 0.3

 | 52.13 ± 2.0

 | 91.00 | 43.25
 | 85.59 ± 0.6
 | 59.74 ± 2.0 | 91.13 ± 0.6
 | 42.72 ± 2.8 | 91.95 ± 0.5
 | 43.55 ± 2.4 | 94.23 ± 0.3
 | 33.21 ± 1.2 |
| ¥ E

 | DOCTOR

 | 90.39 ± 0.3

 | 51.87 ± 1.6

 | 91.26 | 40.22
 | 85.73 ± 0.6
 | 57.89 ± 2.3 | 91.41 ± 0.5
 | 39.22 ± 2.2 | 92.20 ± 0.5
 | 40.22 ± 2.7 | 94.51 ± 0.3
 | 29.41 ± 1.8 |
| Z.S

 | $-\mathcal{H}$

 | 90.07 ±0.4

 | 54.05 ±2.9

 | 91.81 | 38.24
 | 85.91 ±0.0
 | 58.47 ± 3.3 | 92.01 ± 0.5
 | 37.20 ±2.6 | 92.59 ± 0.5
 | 40.10 ± 3.9 | 94.90 ± 0.3
 | $\frac{28.01 \pm 3.2}{10.50}$ |
| 20

 | z 1
Residual

 | 48.00 ±1.1
47.50 ±1.8

 | 94.70 ±1.4

 | 78.22 | 58.70
78.07
 | 52.27 ±0.7
 | 94.58 ±0.5 | 70.28 ±1.6
 | 77.83 ±1.8 | 72.23 ±2.4
 | 71.51 ±2.6 | 85.65 ±2.7
40.07 ±6.3
 | 49.30 ±5.8
07.22 ±0.7 |
|

 | Max Logit

 | 41.33 ± 1.8
83.21 ± 0.6

 | 65.16 ± 3.4

 | 92.33 | 34.15
 | 44.30 ± 1.1
82.68 ±0.7
 | 65.37 ±3.6 | 92.48 ±0.6
 | 34.03 ± 0.9
36.50 ± 4.1 | 91.49 ± 0.4
 | 43.27 ± 3.1 | 94.57 ± 0.3
 | 29.17 ± 3.0 |
|

 | Energy

 | 82.05 ± 0.6

 | 69.79 ±3.9

 | 92.06 | 35.32
 | 81.96 ± 0.7
 | 68.70 ± 4.2 | 92.15 ± 0.6
 | 38.62 ± 4.9 | 90.92 ± 0.4
 | 46.28 ± 3.3 | 94.13 ± 0.4
 | 31.70 ± 2.8 |
|

 | Gradnorm

 | 60.17 ± 1.5

 | $87.88 \ {\pm 2.5}$

 | 85.22 | 44.41
 | $62.90 \ \pm 0.5$
 | 86.89 ± 0.8 | 81.11 ± 1.7
 | 59.23 ± 3.3 | $81.09 \ {\pm} 1.8$
 | 57.80 ± 2.7 | 91.00 ± 1.8
 | 34.46 ± 3.9 |
|

 | ViM

 | 80.62 ± 0.7

 | 78.13 ± 2.3

 | 92.34 | 38.14
 | 78.90 ± 0.8
 | 80.30 ± 2.2 | 90.54 ± 0.7
 | 54.70 ± 5.0 | 91.87 ± 1.2
 | 43.84 ± 5.6 | 90.13 ± 1.8
 | 56.97 ± 8.5 |
|

 | Manal

 | 49.90 ±2.0

 | 90.30 ±0.9

 | 01.00 | 78.92
 | 40.37 ±1.5
 | 90.83 ±0.5 | 30.34 ± 1.6
 | 95.01 ± 0.6 | 03.00 ±3.7
 | 80.30 ± 2.0 | 47.42 ± 6.5
 | 96.99 ± 0.8 |
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 | AUROC | %FPR@95.
 | . %AUROC
 | %FPR@95. | . %AUROC
 | %FPR@95. | . %AUROC↑
 | %FPR@95↓ | . %AUROC†
 | %FPR@95↓ |
|

 | $(MSP, z _1)$

 | 90.34 ± 0.2

 | 52.70 ± 3.2

 | 93.64 ± 0.7 | 32.02 ± 3.3
 | 95.93 ± 1.0
 | 25.33 ± 6.4 | 95.84 ± 3.3
 | 24.39 ± 13.7 | 90.72 ± 6.0
 | 49.63 ± 20.8 | 83.44 ± 0.9
 | 58.91 ± 1.9 |
|

 | Q (MSP,Res.)

 | 90.43 ±0.

 | 3 52.10 ±3.0

 | 96.00 ±0.5 | 19.81 ±2.1
 | 95.52 ±0.7
 | 27.31 ±5.3 | 95.32 ±4.0
 | 26.97 ±17.5 | 98.21 ±2.3
 | 10.97 ±16.7 | 84.62 ±0.9
 | 53.99 ±1.4 |
|

 | $= (DR, z _1)$

 | 90.29 ±0.3

 | 51 81 ±2 6

 | 94.01 ±0.7
96.28 ±0.5 | 17.29 ± 2.6
 | 90.34 ±1.0
95.82 ±0.6
 | 20.94 ±6.0
23.07 ±4.7 | 95.28 ± 3.2
95.62 ± 4.1
 | 20.30 ±13.5
23.40 ±18.5 | 91.08 ± 5.8
98.63 ± 1.0
 | 47.73 ±16.6
7.93 ±10.4 | 83.04 ±1.0
84.90 ±0.0
 | 50.08 ± 1.5
51.05 ± 1.7 |
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rror: 19.01

 | $(-\mathcal{H}, z _1)$

 | 90.00 ±0.4

 | 54.26 ± 2.7

 | 94.38 ±0.7 | 27.38 ±2.7
 | 96.97 ± 0.8
 | 16.87 ± 4.4 | 96.71 ± 2.8
 | 18.71 ± 13.5 | 91.74 ± 4.3
 | 45.84 ±17.6 | $\frac{84.01 \pm 0.9}{84.01 \pm 0.9}$
 | 56.34 ± 2.4 |
|

 | $(-\mathcal{H}, \text{Res.})$

 | 90.13 ± 0.4

 | 54.01 ± 3.2

 | 96.68 ± 0.5 | 15.70 ± 2.1
 | 96.72 ± 0.6
 | 18.10 ± 3.7 | 96.41 ± 3.6
 | 20.42 ± 16.7 | 99.02 ± 1.5
 | 4.89 ± 5.5 | $\underline{85.33~\pm0.9}$
 | 50.81 ± 2.9 |
|

 | MSP

 | 90.41 ± 0.3

 | 52.13 ± 2.0

 | 92.88 ± 0.8 | 36.61 ± 3.1
 | 95.75 ± 0.8
 | 26.52 ± 6.2 | 94.86 ± 3.5
 | 30.28 ± 13.6 | 89.33 ± 5.7
 | 56.83 ± 20.2 | 83.29 ± 0.9
 | 59.78 ± 2.1 |
|

 | DOCTOR

 | 90.39 ± 0.3

 | 51.87 ± 1.6

 | 93.16 ± 0.8 | 33.46 ± 3.6
 | 96.14 ± 0.8
 | 22.07 ± 5.3 | 95.16 ± 3.5
 | 27.21 ± 14.2 | 89.51 ± 5.5
 | 54.83 ± 20.4 | 83.47 ± 0.9
 | 57.64 ± 1.9 |
| ž.

 | $-\mathcal{H}$

 | 90.07 ± 0.4

 | 54.05 ± 2.9

 | 93.77 ± 0.8 | 30.79 ± 3.7
 | 96.87 ± 0.7
 | 17.55 ± 4.6 | 95.93 ± 3.2
 | 23.43 ± 14.6 | 90.47 ± 4.2
 | 51.63 ± 19.7 | 83.89 ± 0.9
 | 57.02 ± 1.7 |
| 20

 | z 1
Doministration

 | 48.06 ±1.1

 | 94.70 ±1.4

 | 88.90 ±1.5 | 39.67 ±2.6
 | 76.97 ±9.7
 | 82.24 ±14.3 | 97.28 ±2.3
 | 14.64 ±13.9 | 97.36 ±4.6
 | 13.51 ±33.1 | 63.00 ±1.7
 | 84.82 ±1.6 |
|

 | Max Logit

 | 47.39 ±1.8
83.21 ±0.6

 | 90.45 ± 1.1
65.16 ± 3.4

 | 95.44 ±2.4 | 40.03 ± 3.8
22.04 ± 2.8
 | 97.65 ± 0.3
 | 99.04 ± 0.4
13.56 ± 6.0 | 33.93 ± 13.2
98.93 ± 1.0
 | 5.83 +6.4 | 91.31 ± 0.4
94.73 ± 5.3
 | 20.92 ±12.5
31.53 ±28.8 | 82.98 ±0.9
 | 10.90 ±2.2
60.09 ±2.6 |
|

 | Energy

 | 82.05 ± 0.6

 | 69.79 ±3.9

 | 95.37 ± 0.8 | 22.50 ± 2.8
 | 97.51 ± 0.8
 | 14.19 ± 6.5 | 99.07 ±1.0
 | 5.00 ± 6.5 | 94.93 ± 5.4
 | 29.05 ± 30.8 | 82.52 ± 0.9
 | 61.86 ± 2.7 |
|

 | Gradnorm

 | 60.17 ± 1.5

 | $87.88 \ {\pm 2.5}$

 | 93.00 ± 1.1 | 26.57 ± 3.0
 | 90.54 ± 4.6
 | 42.85 ± 16.2 | $\underline{98.98~\pm1.1}$
 | 4.98 ± 7.2 | 97.59 ± 4.2
 | $13.05 \ {\pm} 31.9$ | 70.78 ± 1.8
 | 73.88 ± 3.1 |
|

 | ViM

 | 80.62 ± 0.7

 | 78.13 ± 2.3

 | 98.46 ±0. | 17.62 ±2.1
 | 94.42 ± 1.4
 | 44.55 ± 14.5 | 98.04 ± 1.3
 | 8.84 ± 10.2 | 99.82 ± 0.1
 | 0.31 ± 0.3 | 88.85 ±0.9
 | 46.15 ±3.9 |
|

 | Manal

 | 49.90 ± 2.0

 | 90.30 ± 0.9

 | 84.04 ±2.1 | 46.98 ± 3.2
 | 41.02 ± 14.2
 | 99.70 ±0.3 | 57.88 ±12.5
 | 88.37 ±8.1 | 94.08 ± 5.4
 | 20.45 ± 13.0 | 69.29 ± 2.5
 | 79.65 ±1.9 |
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 | %FPR@95. | . %AUROC↑
 | %FPR@95↓ | . %AUROC†
 | %FPR@95↓ |
|

 | $(MSP, \boldsymbol{z} _1)$
$(MSD D \dots)$

 | 89.53 ±0.3

 | 55.51 ±1.0

 | 92.27 | 34.82
 | 84.78 ±0.3
 | 61.33 ±1.1 | 90.46 ±0.3
 | 43.03 ±0.9 | 91.27 ±0.4
 | 44.05 ± 1.5 | 94.20 ±0.8
 | $\frac{31.88 \pm 3.7}{27.07 \pm 0.0}$ |
|

 | $\mathcal{O}_{\mathbf{z}}(\mathrm{DR}, \mathbf{z} _1)$

 | 89.40 ±0.2

 | $\frac{55.10 \pm 1.4}{56.49 \pm 2.2}$

 | 92.66 | 32.30
 | 84.90 ±0.3
 | 61.16 ± 0.3
61.26 ± 0.8 | 90.23 ± 0.4
90.82 ± 0.3
 | 44.42 ± 2.3
40.52 ± 2.2 | 91.20 ± 0.3
91.61 ± 0.4
 | 44.03 ± 1.0
42.36 ± 1.0 | 94.63 ±0.7
 | 29.15 +2.8 |
|

 | (DR,Res.)

 | 89.60 ± 0.3

 | 55.69 ± 2.0

 | 92.08 | 36.21
 | 84.98 ± 0.3
 | 60.92 ± 1.1 | 90.58 ± 0.4
 | 41.98 ± 2.3 | 91.51 ± 0.5
 | 43.22 ± 1.9 | 93.40 ± 0.9
 | 36.31 ± 4.2 |
| 10

 | $(-H, z _1)$

 | 88.90 ± 0.2

 | 58.64 ± 2.1

 | 92.92 | 32.16
 | 84.96 ± 0.2
 | 62.72 ± 0.9 | $\underline{91.35~\pm0.3}$
 | 39.89 ± 2.1 | 91.82 ± 0.4
 | 43.99 ± 1.4 | 94.74 ± 0.7
 | 30.47 ± 3.9 |
| 5 Z

 | $(-\mathcal{H}, \text{Res.})$

 | 89.12 ± 0.3

 | 57.85 ± 3.1

 | 92.69 | 34.20
 | 85.08 ±0.3
 | 62.06 ±0.8 | 91.33 ± 0.3
 | 39.93 ± 2.2 | 91.93 ± 0.4
 | 43.80 ± 1.2 | 94.01 ± 0.8
 | 35.24 ± 3.7 |
| it i

 | MSP

 | 89.64 ± 0.3

 | 55.03 ± 1.5

 | 91.54 | 39.73
 | 84.84 ± 0.3
 | 61.03 ± 0.9 | 90.17 ± 0.3
 | 44.77 ± 1.7 | 90.91 ± 0.5
 | 46.34 ± 1.8 | 93.57 ± 0.9
 | 35.85 ± 3.8 |
| Na St

 | DOCTOR

 | 89.57 ±0.2

 | $\frac{55.48 \pm 2.1}{58.42 \pm 2.2}$

 | 91.86 | 37.43
 | 84.99 ±0.3
 | 60.61 ±0.3 | 90.52 ±0.3
 | 42.46 ± 2.1 | 91.20 ± 0.5
 | 44.96 ± 1.0 | 93.91 ±0.8
 | 33.40 ±3.4 |
| ido
18

 | -n

 | 53.56 ±0.7

 | 93.40 ± 0.4

 | 92.57 | 53.50
 | 85.05 ±0.2
56.05 ±0.7
 | 02.55 ±0.4
92.65 ±0.5 | 91.10 ± 0.3
75.15 ± 1.4
 | 41.27 ±2.0
73.17 ±2.2 | 91.34 ± 0.4
74.05 ± 1.4
 | 40.11 ± 1.4
68.03 ± 1.7 | $\frac{94.24 \pm 0.7}{86.03 \pm 1.7}$
 | 33.63 ± 3.8
48.35 ± 5.0 |
| ΣĤ

 | Residual

 | 41.99 ±0.8

 | 97.30 ±0.3

 | 41.42 | 94.11
 | 42.46 ± 0.7
 | 97.37 ±0.3 | 40.90 ± 1.2
 | 96.70 ±0.9 | 44.63 ± 1.1
 | 94.39 ± 0.6 | 22.88 ±4.7
 | 99.18 ±0.4 |
|

 | Max Logit

 | 83.14 ± 0.6

 | 63.85 ± 1.8

 | 92.08 | 34.64
 | 81.75 ± 0.4
 | 67.36 ± 1.3 | 91.40 ± 0.2
 | 42.44 ± 2.1 | 89.70 ± 0.8
 | 50.66 ± 3.0 | 92.63 ± 1.0
 | 39.76 ± 4.9 |
|

 | Energy

 | 81.87 ± 0.7

 | 67.98 ± 2.0

 | 91.68 | 36.68
 | 80.87 ± 0.4
 | 70.81 ± 1.2 | 90.93 ± 0.3
 | 45.77 ± 1.9 | 88.86 ± 0.8
 | 54.53 ± 3.1 | 91.76 ± 1.0
 | 44.23 ± 5.7 |
|

 | Gradnorm

 | 65.27 ±1.1

 | 85.73 ±1.1

 | 87.25 | 40.67
 | 00.07 ±0.7
 | 85.13 ±1.0 | 83.94 ±1.0
 | 50.57 ±2.9 | 81.94 ±1.2
 | 58.20 ±1.7 | 90.73 ±1.3
 | 30.80 ±3.4 |
|

 | Mahal

 | 44.44 ± 1.0

 | 97.14 ±0.6

 | 43.65 | 94.20
 | 44.57 LO.7
 | 97.23 ±0.4 | 42.82 ±1.1
 | 06.64 LO.8 | 48.02 ±1.0
 | 04.11 LO.8 | 27 31 ±4 s
 | 00.07 ±0.4 |
|

 |

 |

 | 011111 2010

 | | 0.000
 | 44.01 ±0.1
 | 01.20 10.4 | 42.02 11.1
 | 30.04 ± 0.8 | 40.00 ± 1.2
 | 54.11 ± 0.8 | 21:01 14:0
 | 99.07 ± 0.3 |
|

 |

 | I

 | DX

 | Tex | tures
 | Colon
 | oscopy | Colo
 | rectal | 40.05 ±1.2
 | 54.11 ±0.8 | Image
 | 99.07 ±0.3 |
| Model

 | Method

 | I
%AUROC↑

 | D ≭
%FPR@95↓

 | Tex
%AUROC↑ | tures
%FPR@95↓
 | Colon
%AUROC†
 | oscopy
%FPR@95↓ | Colo
. %AUROC↑
 | rectal
%FPR@95↓ | 43.03 ±1.2
Ne
.%AUROC↑
 | 54.11 ±0.8
• %FPR@95↓ | Image
%AUROC†
 | 99.07 ±0.3
• Net-O
• %FPR@95↓ |
| Model

 | Method
(MSP, z 1)

 | I
%AUROC↑
89.53 ±0.3

 | DX
%FPR@95↓
55.51 ±1.0

 | Tex
%AUROC1
94.05 ±0.4 | tures
%FPR@95↓
28.69 ±0.5
 | Colon
%AUROC↑
96.64 ±0.8
 | oscopy
%FPR@95↓
19.38 ±4.8 | Colo
. %AUROC↑
96.98 ±1.4
 | 90.04 ±0.8
rectal
%FPR@95↓
19.39 ±8.8 | 48.03 ±1.2
Network
98.77 ±1.1
 | 54.11 ±0.8
54.11 | Image
%AUROC†
83.30 ±0.3 | 99.07 ±0.3
■Net-O
%FPR@95↓
57.98 ±1.2
 |
| Model

 | Method
(MSP, z 1)
(MSP,Res.)

 | II
%AUROC↑
89.53 ±0.3
89.67 ±0.3

 | DX
%FPR@95↓
55.51 ±1.0
55.10 ±1.4

 | Tex
%AUROC1
94.05 ±0.4
94.26 ±0.2 | tures
%FPR@95↓
28.69 ±0.5
28.37 ±1.2
 | Colon
%AUROC↑
96.64 ±0.8
96.25 ±0.9
 | oscopy
%FPR@95↓
19.38 ±4.8
21.57 ±4.3 | Colo
.%AUROC↑
96.98 ±1.4
95.45 ±1.7
 | 90.04 ±0.8
rectal
%FPR@95↓
19.39 ±8.8
29.21 ±9.2 | 48.03 ±1.2
No.
%AUROC↑
98.77 ±1.1
96.45 ±2.5
 | 94.11 ±0.3
pise
%FPR.@95↓
7.61 ±7.7
24.49 ±24.8 | Image
%AUROC↑
83.30 ±0.3
84.09 ±0.4
 | 99.07 ±0.3
• Net-O
• %FPR@95↓
57.98 ±1.2
55.02 ±1.7 |
| Model

 | Method
(MSP, z 1)
(MSP,Res.)
OR, z 1)
(DR, z 1)

 | I
%AUROC↑
89.53 ±0.3
89.67 ±0.3
89.40 ±0.2
89.60 ±0.2

 | DX
%FPR@95↓
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0

 | Tex
%AUROC1
94.05 ±0.4
94.26 ±0.2
94.54 ±0.4
94.68 ±0.2 | tures
%FPR@95↓
28.69 ±0.5
28.37 ±1.2
25.70 ±1.1
25.37 ±0.7
 | Colon
%AUROC
96.64 ±0.8
96.25 ±0.9
97.07 ±0.7
96.61 ±0.8
 | oscopy
%FPR@95↓
19.38 ±4.8
21.57 ±4.3
15.64 ±3.1
17.89 ±2.8 | Colo
.%AUROC↑
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
 | rectal
%FPR@95↓
19.39 ±8.8
29.21 ±9.2
14.88 ±7.2
26.30 ±0.1 | 46.03 ±1.2
Ne
%AUROC↑
98.77 ±1.1
96.45 ±2.5
<u>99.25 ±0.9</u>
<u>96.68 ±2.7</u>
 | 54.11 ±0.8
pise
·%FPR@95↓
7.61 ±7.7
24.49 ±24.8
4.38 ±5.6
21.41 ±20.2 | Image
%AUROC↑
83.30 ±0.3
84.09 ±0.4
83.56 ±0.2
84.49 ±0.4
 | 99.07 ±0.3
• %FPR@95↓
57.98 ±1.2
55.02 ±1.7
56.83 ±1.6
52.49 ±2.2 |
| Model

 | Method
(MSP, z 1)
(MSP,Res.)
(DR, z 1)
(DR,Res.)
(-H, z 1)

 | II
%AUROC↑
89.53 ±0.3
89.67 ±0.3
89.40 ±0.2
<u>89.60 ±0.3</u>
88.90 ±0.2

 | DX
%FPR@95 \downarrow
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1

 | Tex
%AUROC↑
94.05 ±0.4
94.26 ±0.2
94.54 ±0.4
94.68 ±0.2
94.88 ±0.4 | tures
%FPR@95↓
28.69 ±0.5
28.37 ±1.2
25.70 ±1.1
25.37 ±0.7
25.26 ±1.1
 | Colon
%AUROC
96.64 ±0.8
96.25 ±0.9
97.07 ±0.7
96.61 ±0.8
97.71 ±0.5
 | 05120 103
%FPR@95↓
19.38 ±4.8
21.57 ±4.3
15.64 ±3.1
17.89 ±3.8
11.67 ±3.3 | Colo
.%AUROC↑
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
97.82 ±1.1
 | 95.04 ±0.8 rectal '%FPR@95↓ 19.39 ±8.8 29.21 ±9.2 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 | 48.03 ±1.2
Net
%AUROC↑
98.77 ±1.1
96.45 ±2.5
<u>99.25 ±0.9</u>
96.68 ±2.7
99.07 ±1.2
 | 54.11 ±0.8
→ %FPR@95↓
7.61 ±7.7
24.49 ±24.8
4.38 ±5.6
21.41 ±30.2
4.28 ±6.6 | Image
%AUROC↑
83.30 ±0.3
84.09 ±0.4
83.56 ±0.2
<u>84.49 ±0.4</u>
83.93 ±0.3
 | 99.07 ± 0.3
eNet-O
57.98 ± 1.2
55.02 ± 1.7
56.83 ± 1.6
52.49 ± 2.2
57.35 ± 1.6 |
| Model

 | $\begin{matrix} \textbf{Method} \\ (MSP, \boldsymbol{z} _1) \\ (MSP, Res.) \\ (DR, Res.) \\ (-\mathcal{H}, \boldsymbol{z} _1) \\ (-\mathcal{H}, Res.) \end{matrix}$

 | I
%AUROC↑
89.53 ±0.3
89.67 ±0.3
89.40 ±0.2
89.60 ±0.3
88.90 ±0.2
89.12 ±0.3

 | Dx
%FPR $@95\downarrow$
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1

 | Tex
%AUROC↑
94.05 ±0.4
94.26 ±0.2
94.54 ±0.4
94.68 ±0.2
94.88 ±0.4
95.37 ±0.2 | tures
%FPR@95↓
28.69 ±0.5
28.37 ±1.2
25.70 ±1.1
25.37 ±0.7
$\frac{25.26 \pm 1.1}{22.62 \pm 0.8}$
 | Colon
%AUROC↑
96.64 ±0.8
96.25 ±0.9
97.07 ±0.7
96.61 ±0.8
<u>97.71 ±0.5</u>
97.57 ±0.6
 | 05120 103
%FPR@95J
19.38 ±4.8
21.57 ±4.3
15.64 ±3.1
17.89 ±3.8
<u>11.67 ±3.3</u>
12.44 ±3.8 | Colo
.%AUROC↑
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
97.82 ±1.1
96.76 ±1.4
 | 30.04 ±0.8 rectal '%FPR@95↓ 19.39 ±8.8 29.21 ±9.2 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 | 43.03 ±1.2
Ne
%AUROC↑
98.77 ±1.1
96.45 ±2.5
<u>99.25 ±0.9</u>
96.68 ±2.7
99.07 ±1.2
97.29 ±2.8
 | 54.11 ±0.8
→ %FPR@95↓
7.61 ±7.7
24.49 ±24.8
4.38 ±5.6
21.41 ±30.2
4.28 ±6.6
17.55 ±30.2 | Image
%AUROC↑
83.30 ±0.3
84.09 ±0.4
83.56 ±0.2
<u>84.49 ±0.4</u>
83.93 ±0.3
84.91 ±0.3
 | $\begin{array}{c} \textbf{99.07 \pm 0.3} \\ \textbf{eNet-O} \\ & \forall FPR@95 \downarrow \\ \hline 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 56.83 \pm 1.6 \\ \hline 52.49 \pm 2.2 \\ \hline 57.35 \pm 1.6 \\ \hline 53.07 \pm 1.2 \end{array}$ |
| et V2
:: 21.35

 | $\begin{matrix} \hline Method \\ \hline (MSP, z 1) \\ OBS \\ (MSP, Res.) \\ (DR, Res.) \\ (-\mathcal{H}, z 1) \\ (-\mathcal{H}, Res.) \\ \hline MSP \end{matrix}$

 | II
%AUROC↑
89.53 ±0.3
89.67 ±0.3
89.60 ±0.2
89.60 ±0.2
89.90 ±0.2
89.12 ±0.3
89.64 ±0.3

 | DX
%FPR@954
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1
55.03 ±1.5

 | Tex
%AUROC↑
94.05 ±0.4
94.26 ±0.2
94.54 ±0.4
94.68 ±0.2
94.88 ±0.4
95.37 ±0.2
92.93 ±0.5 | tures
%FPR@95↓
28.69 ±0.5
28.37 ±1.2
25.70 ±1.1
25.37 ±0.7
<u>25.26 ±1.1</u>
<u>22.62 ±0.8</u>
35.28 ±0.8
 | Colon
%AUROC1
96.64 ±0.8
96.25 ±0.9
97.07 ±0.7
96.61 ±0.8
97.71 ±0.5
97.57 ±0.6
96.51 ±0.8
 | 05120 ±03
(%FPR@95,)
19.38 ±4.8
21.57 ±4.3
15.64 ±3.1
17.89 ±3.8
<u>11.67 ±3.3</u>
12.44 ±3.8
20.36 ±4.6 | Colo
%AUROC↑
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
97.82 ±1.1
96.76 ±1.4
95.63 ±1.6
 | sol.04 ±0.8 rectal '%FPR@95.1 19.39 ±8.8 29.21 ±9.2 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 28.52 ±9.4 | No %AUROC↑ 98.77 ±1.1 96.45 ±2.5 99.25 ±0.9 96.68 ±2.7 99.07 ±1.2 97.29 ±2.8 96.22 ±2.7
 | $\begin{array}{l} 54.11 \pm 0.8 \\ \hline \\ \textbf{bise} \\ \hline \\ \textbf{\%FPR.} 0.95 \downarrow \\ \hline \textbf{7.61} \pm 7.7 \\ 24.49 \pm 24.8 \\ 4.38 \pm 5.6 \\ 21.41 \pm 30.2 \\ 4.28 \pm 6.6 \\ 17.55 \pm 30.2 \\ 26.33 \pm 25.6 \end{array}$ | Image
%AUROC [↑]
83.30 ±0.3
84.09 ±0.4
83.56 ±0.2
<u>84.49 ±0.4</u>
83.93 ±0.3
<u>84.91 ±0.3</u>
83.11 ±0.3
 | 99.07 ± 0.3
8Net-O
57.98 ± 1.2
55.02 ± 1.7
56.83 ± 1.6
52.49 ± 2.2
57.35 ± 1.6
53.07 ± 1.2
59.05 ± 1.3 |
| eNetV2
irror: 21.35

 | Method (MSP, z 1) (MSP,Res.) (DR, z 1) (DR,Res.) (-H, z 1) (-H,Res.) MSP DOCTOR

 | II
%AUROC†
89.53 ±0.3
89.67 ±0.3
89.40 ±0.2
89.60 ±0.3
88.90 ±0.2
89.12 ±0.3
89.57 ±0.2

 | $\begin{array}{c} \text{Dx} \\ & \% \text{FPR} \$95 \downarrow \\ & 55.51 \pm 1.0 \\ & 55.69 \pm 2.0 \\ & 55.69 \pm 2.0 \\ & 58.64 \pm 2.1 \\ & 57.85 \pm 3.1 \\ & 55.03 \pm 1.5 \\ & 55.48 \pm 2.1 \\ \end{array}$

 | $\begin{array}{c} {\bf Tex} \\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & $ | tures
%FPR $@95\downarrow$
28.69 ± 0.5
28.37 ± 1.2
25.70 ± 1.1
25.37 ± 0.7
<u>25.26 ± 1.1</u>
<u>22.62 ± 0.8</u>
35.28 ± 0.8
32.59 ± 1.6
 | Colon
%AUROC↑
96.64 ±0.8
96.25 ±0.9
97.07 ±0.7
96.61 ±0.8
<u>97.71 ±0.5</u>
97.57 ±0.6
96.51 ±0.8
96.99 ±0.8
 | $\begin{array}{l} & \text{oscopy} \\ & & \text{(FPR:095)} \\ & \text{(FPR:095)} \\ \hline 19.38 \pm 4.8 \\ 21.57 \pm 4.3 \\ 15.64 \pm 3.1 \\ 15.64 \pm 3.1 \\ \hline 17.89 \pm 3.8 \\ \hline 11.67 \pm 3.3 \\ 12.44 \pm 3.8 \\ \hline 20.36 \pm 4.6 \\ 16.46 \pm 3.8 \\ \end{array}$ | Colo
%AUROC↑
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
97.82 ±1.1
96.76 ±1.4
95.63 ±1.6
96.04 ±1.5
 | 50.04 ±0.8 rectal %FPR@954 19.39 ±8.8 29.21 ±9.2 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 28.52 ±9.4 25.23 ±8.9 | N6 %AUROC↑ 98.77 ±1.1 96.45 ±2.5 99.25 ±0.9 96.68 ±2.7 99.07 ±1.2 97.29 ±2.8 96.22 ±2.7 96.46 ±2.9
 | $\begin{array}{l} 54.11 \pm 0.8 \\ \hline \\ 85.11 \pm 0.8 \\ \hline \\ 85.11 \pm 0.7 \\ 24.49 \pm 24.8 \\ 4.38 \pm 5.6 \\ 21.41 \pm 30.2 \\ 4.28 \pm 6.6 \\ 17.55 \pm 30.2 \\ 26.33 \pm 25.6 \\ 23.31 \pm 31.4 \end{array}$ | Image %AUROC↑ 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.49 ±0.4 83.93 ±0.3 84.19 ±0.3 83.11 ±0.3 83.34 ±0.3
 | $\begin{array}{c} \textbf{99.07 \pm 0.3} \\ \textbf{eNet-O} \\ & \forall FPR \textcircled{@95} \downarrow \\ \hline 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 56.83 \pm 1.6 \\ \hline 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ \hline 53.07 \pm 1.2 \\ \hline 59.05 \pm 1.3 \\ 57.87 \pm 1.3 \end{array}$ |
| bileNetV2
%Error: 21.35

 | $\begin{matrix} & Method \\ & (MSP, z _1) \\ (MSP, Res.) \\ & (DR, z _1) \\ & (-\mathcal{H}, Res.) \\ & (-\mathcal{H}, z _1) \\ & (-\mathcal{H}, Res.) \\ \hline & MSP \\ & DOCTOR \\ & -\mathcal{H} \\ & z \end{matrix}$

 | II
%AUROC↑
89.53 ±0.3
89.67 ±0.3
89.40 ±0.2
89.60 ±0.3
88.90 ±0.2
89.12 ±0.3
89.57 ±0.2
89.57 ±0.2
89.57 ±0.2

 | $\begin{array}{c} & & \\$

 | $\begin{array}{c} {\bf Tex} \\ \% {\rm AUROC1} \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.54 \pm 0.4 \\ 94.58 \pm 0.4 \\ 95.37 \pm 0.2 \\ 92.93 \pm 0.5 \\ 93.32 \pm 0.4 \\ 94.05 \pm 0.4 \\ 90.98 \pm 0.4 \\ 90.98 \pm 0.4 \\ \end{array}$ | tures
%FPR $@95\downarrow$
28.69 ± 0.5
28.37 ± 1.2
25.70 ± 1.1
25.37 ± 0.7
25.26 ± 1.1
22.62 ± 0.8
35.28 ± 0.8
32.59 ± 1.6
29.72 ± 0.9
 | Quild ±0.1 Colon %AUROC↑ 96.64 ±0.8 96.25 ±0.9 97.07 ±0.7 96.61 ±0.8 97.71 ±0.5 97.57 ±0.6 96.51 ±0.8 96.99 ±0.8 97.08 ±0.6
 | 03720 ±033
03720 ±033
03720 ±033
19.38 ±4.8
21.57 ±4.3
15.64 ±3.1
17.89 ±3.8
11.67 ±3.3
12.44 ±3.8
20.36 ±4.6
16.46 ±3.8
12.13 ±3.5
0.70 ±0.07
0.40 ±0.8
12.13 ±3.5
0.70 ±0.07
0.40 ±0.8
12.13 ±3.5
0.70 ±0.07
0.40 ±0.8
12.13 ±3.5
0.70 ±0.07
0.70 ±0.75
0.70 ±0.75
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0.75
0.75
0.75
0.75
0.7 | Colo
%AUROC↑
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
97.82 ±1.1
96.76 ±1.4
95.63 ±1.6
96.04 ±1.5
96.82 ±1.4
 | 30.04 ±0.8 rectal %FPR@954 19.39 ±8.8 29.21 ±9.2 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 28.52 ±9.4 25.23 ±8.9 21.15 ±10.2 0.40 ±9.2 | N6 %AUROC↑ 98.77 ±1.1 96.45 ±2.5 99.25 ±0.9 96.68 ±2.7 99.07 ±1.2 97.29 ±2.8 96.46 ±2.9 97.07 ±2.8 97.07 ±2.8
 | $\begin{array}{l} 54.11 \pm 0.8 \\ \hline 95.111 \pm 0.8 \\ \hline \% FPR @95\downarrow \\ \hline 7.61 \pm 7.7 \\ 24.49 \pm 24.8 \\ 4.38 \pm 5.6 \\ 21.41 \pm 30.2 \\ 4.28 \pm 6.6 \\ 17.55 \pm 30.2 \\ 26.33 \pm 25.6 \\ 23.31 \pm 31.4 \\ 19.33 \pm 30.7 \\ 0.01 \pm 30.7 \\ $ | Image %AUROC↑ 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.49 ±0.4 83.93 ±0.3 84.19 ±0.4 83.34 ±0.3 83.34 ±0.3 83.77 ±0.3 | 99.07 ± 0.3
eNet-O
$\%FPR@95\downarrow$
57.98 ± 1.2
55.02 ± 1.7
56.83 ± 1.6
52.49 ± 2.2
57.35 ± 1.6
53.07 ± 1.2
59.05 ± 1.3
57.87 ± 1.3
58.30 ± 1.2
90.74 ± 2.2
59.05 ± 1.3
59.05 ± 1.3 |
| MobileNetV2
ID %Error: 21.35
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 | $\begin{tabular}{ c c c c c } \hline Method \\ \hline (MSP, z _1) \\ \hline (MSP, Res.) \\ \hline (DR, z _1) \\ (DR, Res.) \\ \hline (DR, Res.) \\ \hline (DR, Res.) \\ \hline MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \end{tabular}$

 | T
%AUROC [†]
89.53 ±0.3
89.67 ±0.3
89.60 ±0.2
89.60 ±0.3
89.90 ±0.2
89.12 ±0.3
89.912 ±0.3
89.57 ±0.2
89.02 ±0.2
53.56 ±0.7
41.99 ±0.8

 | DX
%FPR@95.
55.51 ±1.0
55.50 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1
57.85 ±3.1
55.03 ±1.5
55.03 ±1.5
55.48 ±2.1
58.43 ±2.2
93.40 ±0.4
97.30 ±0.3

 | $\begin{array}{c} {\rm Tex} \\ \$ {\rm MUROC}{\rm 1} \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.26 \pm 0.2 \\ 94.28 \pm 0.4 \\ 94.28 \pm 0.4 \\ 95.37 \pm 0.2 \\ 92.93 \pm 0.5 \\ 93.32 \pm 0.4 \\ 94.05 \pm 0.4 \\ 92.88 \pm 0.3 \\ 92.88 \pm 0.3 \\ 92.88 \pm 0.4 \\ 92.88 \pm $ | tures
%FPR@95]
28.69 \pm 0.5
28.70 \pm 1.2
25.70 \pm 1.1
25.37 \pm 0.7
25.26 \pm 1.1
22.62 \pm 0.8
35.28 \pm 0.8
35.28 \pm 0.8
32.59 \pm 1.6
29.72 \pm 0.9
27.55 \pm 1.5
27.8 \pm 2.4 | Quilty ±0.1 Colon %AUROC↑ 96.64 ±0.8 96.25 ±0.9 97.07 ±0.7 96.61 ±0.8 97.71 ±0.5 97.57 ±0.6 96.51 ±0.8 96.99 ±0.8 97.98 ±0.6 77.32 ±6.6

 | $\begin{array}{l} \textbf{03.103} \\ \textbf{03.103} \\$ | Colo
%AUROC7
96.98 \pm 1.4
95.45 \pm 1.7
97.61 \pm 1.3
95.77 \pm 1.6
97.82 \pm 1.1
96.76 \pm 1.4
95.63 \pm 1.6
96.04 \pm 1.5
96.82 \pm 1.4
98.20 \pm 1.1
98.20 \pm 1.4
98.20 \pm 1.1 | $\begin{array}{c} 30.04 \pm 0.8 \\ \hline \\ \textbf{rectal} \\ \hline \\ \textbf{\%FPR@95} \\ 19.39 \pm 8.8 \\ 29.21 \pm 9.2 \\ 14.88 \pm 7.2 \\ 26.30 \pm 9.1 \\ 13.78 \pm 7.6 \\ 21.12 \pm 10.8 \\ 28.52 \pm 9.4 \\ 25.23 \pm 8.9 \\ 21.15 \pm 10.2 \\ 9.40 \pm 6.4 \\ 99.38 \pm 1.2 \end{array}$
 | No. %AUROC↑ 98.77 ±1.1 96.45 ±2.5 99.25 ±0.9 96.68 ±2.7 97.29 ±2.8 96.22 ±2.7 96.46 ±2.9 97.07 ±2.8 99.93 ±0.0 99.61 ±18.3 | 54.11 ± 0.8
7.61 ± 7.7
24.49 ± 24.8
4.38 ± 5.6
21.41 ± 30.2
4.28 ± 6.6
27.55 ± 30.2
26.33 ± 25.6
23.31 ± 31.4
19.33 ± 30.7
0.01 ± 0.0
93.66 ± 5.7
 | $\begin{array}{c} {} Image \\ \% AUROC1 \\ 83.30 \pm 0.3 \\ 84.09 \pm 0.4 \\ 83.56 \pm 0.2 \\ 84.91 \pm 0.4 \\ 83.93 \pm 0.3 \\ 84.91 \pm 0.3 \\ 83.11 \pm 0.3 \\ 83.14 \pm 0.3 \\ 83.17 \pm 0.3 \\ 83.77 \pm 0.3 \\ 67.33 \pm 2.0 \\ 67.33 \pm 2.0 \\ 97.7 \pm 1.2 \end{array}$ | $\begin{array}{c} \textbf{39.01 \pm 0.3} \\ \textbf{e} \textbf{Net-O} \\ \textbf{57.98 \pm 1.2} \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.683 \pm 1.6 \\ \underline{52.49 \pm 2.2} \\ 57.35 \pm 1.6 \\ \underline{53.07 \pm 1.2} \\ 59.05 \pm 1.3 \\ 57.87 \pm 1.3 \\ 58.30 \pm 1.2 \\ 80.74 \pm 3.0 \\ 80.783 \pm 0.7 \end{array}$ |
| MobileN et V2
ID %Error: 21.35

 | $\begin{tabular}{ c c c c } \hline Method \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (-H, Res.) \\ (-\mathcal{H}, z _1) \\ \hline (-\mathcal{H}, Res.) \\ \hline MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \\ Max Logit \\ \hline Max Logit \\ \hline \end{tabular}$

 | $\begin{array}{c} 11\\ \% AUROC \uparrow\\ 89.53 \pm 0.3\\ 89.67 \pm 0.3\\ 89.67 \pm 0.3\\ 89.60 \pm 0.3\\ 89.90 \pm 0.2\\ 89.12 \pm 0.3\\ 89.912 \pm 0.3\\ 89.912 \pm 0.3\\ 89.57 \pm 0.2\\ 89.57 \pm 0.2\\ 89.57 \pm 0.2\\ 89.55 \pm 0.7\\ 41.99 \pm 0.8\\ 83.14 \pm 0.6\end{array}$

 | DX
%FPR@95,
55.51 ±1.0
55.50 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1
55.03 ±1.5
55.48 ±2.1
58.43 ±2.2
93.40 ±0.4
97.30 ±0.3
63.85 ±1.8

 | $\begin{array}{c} {\bf Tex} \\ \$ {\rm (AUROC)} \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.26 \pm 0.2 \\ 94.28 \pm 0.4 \\ 94.68 \pm 0.2 \\ 94.88 \pm 0.4 \\ 95.37 \pm 0.2 \\ 92.93 \pm 0.5 \\ 93.32 \pm 0.4 \\ 93.32 \pm 0.4 \\ 94.05 \pm 0.4 \\ 92.88 \pm 0.3 \\ 56.86 \pm 1.4 \\ 95.13 \pm 0.4 \end{array}$ | tures
%FPR@95,
28.69 ± 0.5
28.77 ± 1.2
25.70 ± 1.1
25.26 ± 1.1
22.62 ± 0.8
35.28 ± 0.8
32.59 ± 1.6
29.72 ± 0.9
27.55 ± 1.5
78.82 ± 2.1
25.45 ± 1.1
 | Quilty 20.1 Colon %AUROC1 96.25 ±0.9 97.07 ±0.7 96.61 ±0.8 97.77 ±0.6 96.51 ±0.8 96.51 ±0.8 96.68 ±0.6 79.90 ±5.7 27.32 ±6.6 98.12 ±0.5
 | $\begin{array}{l} & \text{oscopy} \\ & & \text{\%FPR@95} \\ \hline 19.38 \pm 4.8 \\ 21.57 \pm 4.3 \\ 115.64 \pm 3.1 \\ 17.89 \pm 3.8 \\ \hline 11.67 \pm 3.3 \\ 12.44 \pm 3.8 \\ 20.36 \pm 4.6 \\ 16.46 \pm 3.8 \\ 12.13 \pm 3.5 \\ 80.70 \pm 10.1 \\ 99.64 \pm 1.7 \end{array}$ | $\begin{array}{c} \textbf{Colo}\\ \% AUROC7\\ 96.98 \pm 1.4\\ 95.45 \pm 1.7\\ 97.61 \pm 1.3\\ 95.77 \pm 1.6\\ 97.82 \pm 1.1\\ 96.76 \pm 1.4\\ 95.63 \pm 1.6\\ 96.04 \pm 1.5\\ 96.82 \pm 1.4\\ 98.20 \pm 1.1\\ 28.41 \pm 8.1\\ 28.41 \pm 8.1\\ 28.27 \pm 1.0\\ \end{array}$
 | $\begin{array}{c} 30.04 \pm 0.8 \\ \hline \\ \textbf{rectal} \\ 19.39 \pm 8.8 \\ 29.21 \pm 9.2 \\ 14.88 \pm 7.2 \\ 26.30 \pm 9.1 \\ 13.78 \pm 7.6 \\ 21.12 \pm 10.8 \\ 28.52 \pm 9.4 \\ 25.23 \pm 8.9 \\ 21.15 \pm 10.2 \\ \underline{9.40 \pm 6.4} \\ 99.38 \pm 1.2 \\ 9.72 \pm 7.5 \end{array}$ | $\begin{array}{r} \textbf{N}_{6}\\ \% AUROC\uparrow\\ 98.77\pm1.1\\ 96.45\pm2.5\\ 99.25\pm0.9\\ 96.68\pm2.7\\ 99.07\pm1.2\\ 97.29\pm2.8\\ 96.22\pm2.7\\ 96.46\pm2.9\\ 97.07\pm2.8\\ \underline{99.93\pm0.0}\\ 49.61\pm18.3\\ 98.74\pm0.9\end{array}$
 | $\begin{array}{c} 54.11 \pm 0.8 \\ \hline \\ 54.11 \pm 0.8 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $ | $\begin{array}{c} {} {} {} {} {} {} {} {} {} {} {} {} {}$
 | $\begin{array}{c} \textbf{39.01 \pm 0.3} \\ \textbf{a} \textbf{Net-O} \\ \textbf{57.98 \pm 1.2} \\ \textbf{55.02 \pm 1.7} \\ \textbf{55.02 \pm 1.7} \\ \textbf{55.02 \pm 1.7} \\ \textbf{56.83 \pm 1.6} \\ \textbf{52.49 \pm 2.2} \\ \textbf{57.35 \pm 1.6} \\ \textbf{53.07 \pm 1.2} \\ \textbf{59.05 \pm 1.3} \\ \textbf{57.87 \pm 1.3} \\ \textbf{58.30 \pm 1.2} \\ \textbf{80.74 \pm 3.0} \\ \textbf{87.83 \pm 0.7} \\ \textbf{63.26 \pm 1.5} \end{array}$ |
| MobileNetV2
ID %Error: 21.35

 | $\begin{tabular}{ c c c c } \hline Method \\ \hline (MSP, z _1) \\ OBS, z _1 \\ OBS, z _1 \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \\ Max Logit \\ Energy \\ \hline \end{tabular}$

 | II %AUROC↑ 89.53 ±0.3 89.67 ±0.3 89.60 ±0.3 89.60 ±0.3 89.61 ±0.3 89.57 ±0.2 89.53 ±0.3 89.54 ±0.3 89.57 ±0.2 53.56 ±0.7 41.99 ±0.8 83.14 ±0.6 81.87 ±0.7

 | $\begin{array}{c} \text{Dx} \\ \% \text{FPR:} & \text{@954} \\ \% \text{FPR:} & \text{@954} \\ 55.51 \pm 1.0 \\ 55.51 \pm 1.0 \\ 55.69 \pm 2.0 \\ 55.69 \pm 2.0 \\ 58.64 \pm 2.1 \\ 57.85 \pm 3.1 \\ 55.03 \pm 1.5 \\ 55.48 \pm 2.1 \\ 93.40 \pm 0.4 \\ 97.30 \pm 0.3 \\ 97.30 \pm 0.3 \\ 63.85 \pm 1.8 \\ 67.98 \pm 2.0 \end{array}$

 | $\begin{array}{c} {\bf Tex} \\ \% AUROC1 \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.54 \pm 0.4 \\ 94.68 \pm 0.2 \\ 93.32 \pm 0.4 \\ 95.37 \pm 0.2 \\ 92.93 \pm 0.5 \\ 93.32 \pm 0.4 \\ 92.88 \pm 0.3 \\ 56.86 \pm 1.4 \\ 95.13 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.02 \pm 0.4 \end{array}$ | tures
%FPR@954
28.69 ± 0.5
28.67 ± 1.2
25.70 ± 1.1
25.37 ± 0.7
25.26 ± 1.1
22.62 ± 0.8
35.28 ± 0.8
32.59 ± 1.6
32.59 ± 1.6
29.72 ± 0.9
27.55 ± 1.5
78.82 ± 2.1
25.45 ± 1.1
25.45 ± 1.1
 | $\begin{array}{c} 44.31 \pm 0.7 \\ \hline \mathbf{Colom} \\ \% AUROC1 \\ 96.64 \pm 0.8 \\ 96.25 \pm 0.9 \\ 97.07 \pm 0.7 \\ 96.61 \pm 0.8 \\ 97.71 \pm 0.5 \\ 97.57 \pm 0.6 \\ 96.51 \pm 0.8 \\ 96.99 \pm 0.8 \\ 96.99 \pm 0.8 \\ 97.68 \pm 0.6 \\ 79.90 \pm 5.7 \\ 27.32 \pm 6.6 \\ 98.12 \pm 0.5 \\ 97.99 \pm 0.5 \end{array}$
 | $\begin{array}{l} \textbf{oscopy} \\ \% \text{FPR @95,i} \\ \textbf{19.38} \pm 4.8 \\ \textbf{21.57} \pm 4.3 \\ \textbf{15.64} \pm 3.1 \\ \textbf{17.89} \pm 3.8 \\ \textbf{12.44} \pm 3.8 \\ \textbf{20.36} \pm 4.6 \\ \textbf{16.46} \pm 3.8 \\ \textbf{20.36} \pm 4.6 \\ \textbf{16.46} \pm 3.8 \\ \textbf{80.70} \pm \textbf{10.1} \\ \textbf{99.68} \pm 1.1 \\ \textbf{99.64} \pm 3.7 \\ \textbf{10.64} \pm 3.7 \\ \textbf{10.64} \pm 3.2 \\ \textbf{10.64} \pm 3.7 \\ \textbf{10.64} \pm 3.2 \\ $ | $\begin{array}{c} \textbf{Colo}\\ \hline \textbf{\%} AUROC1\\ \hline \textbf{\%} AUROC1\\ 96.98\pm1.4\\ 95.45\pm1.7\\ 97.61\pm1.3\\ 95.77\pm1.6\\ 96.76\pm1.4\\ 95.63\pm1.6\\ 96.04\pm1.5\\ 96.82\pm1.4\\ 98.20\pm1.1\\ 28.41\pm8.1\\ 98.20\pm1.1\\ 28.41\pm8.1\\ 98.21\pm1.1\\ \end{array}$ | $\begin{array}{c} \textbf{30.04 \pm 0.8} \\ \hline \textbf{7} \textbf{cectal} \\ \hline \textbf{7} \textbf{FPR @954} \\ \hline \textbf{19.39 \pm 8.8} \\ \textbf{29.21 \pm 9.2} \\ \textbf{14.88 \pm 7.2} \\ \textbf{26.30 \pm 9.1} \\ \textbf{13.78 \pm 7.6} \\ \textbf{21.12 \pm 10.8} \\ \textbf{28.52 \pm 9.4} \\ \textbf{25.23 \pm 8.9} \\ \textbf{21.15 \pm 10.2} \\ \textbf{9.38 \pm 1.2} \\ \textbf{9.78 \pm 1.5} \\ \textbf{9.72 \pm 7.5} \\ \textbf{8.65 \pm 8.3} \\ \end{array}$
 | $\begin{array}{r} \mathbf{N}\\ \mathbf{N}\\$ | $\begin{array}{l} \begin{array}{l} 54.11\pm 0.8\\ \hline \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
 | $\begin{array}{c} {\rm Image} \\ {\rm Margen} \\ {\rm %AUROC}^{\dagger} \\ {\rm \$3.30\pm0.3} \\ {\rm \$3.30\pm0.3} \\ {\rm \$3.40\pm0.4} \\ {\rm \$3.56\pm0.2} \\ {\rm \$3.93\pm0.3} \\ {\rm \$3.93\pm0.3} \\ {\rm \$3.94\pm0.3} \\ {\rm \$3.11\pm0.3} \\ {\rm \$3.11\pm0.3} \\ {\rm \$3.11\pm0.3} \\ {\rm \$3.34\pm0.3} \\ {\rm \$3.77\pm0.3} \\ {\rm 67.33\pm2.0} \\ {\rm 59.77\pm1.2} \\ {\rm \$3.02\pm0.6} \\ {\rm \$3.02\pm0.6} \\ {\rm \$2.36\pm0.7} \end{array}$ | $\begin{array}{c} \textbf{39.07 \pm 0.3} \\ \textbf{e} \textbf{Net-O} \\ \hline & \textbf{FPR@95\downarrow} \\ 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 56.83 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 53.07 \pm 1.2 \\ 59.05 \pm 1.3 \\ 57.87 \pm 1.3 \\ 57.87 \pm 1.3 \\ 57.87 \pm 1.3 \\ 58.30 \pm 1.2 \\ 80.74 \pm 3.0 \\ 87.83 \pm 0.7 \\ 63.26 \pm 1.5 \\ 66.51 \pm 1.2 \\ \end{array}$ |
| MobileNetV2
ID %Error: 21.35

 | $\begin{array}{c c} \textbf{Method} \\ \hline \textbf{(MSP, z _1)} \\ \textbf{(MSP, Res.)} \\ \textbf{(DR, Res.)} \\ \textbf{(DR, Res.)} \\ \textbf{(-H, z _1)} \\ \textbf{(-H, Res.)} \\ \hline \textbf{MSP} \\ \textbf{DOCTOR} \\ -\mathcal{H} \\ \textbf{ z _1} \\ \textbf{Residual} \\ \textbf{Max Logit Energy} \\ \textbf{Gradhorm} \\ \hline \end{array}$

 | $\begin{array}{c} & & & & & & & & & & & & & & & & & & &$

 | DX
%FPR@95,1
55,51 ±1.0
55,51 ±1.0
55,51 ±1.0
55,69 ±2.0
58,64 ±2.1
57,85 ±3.1
55,63 ±1.5
55,43 ±2.2
93,40 ±0.4
97,30 ±0.3
63,85 ±1.8
67,98 ±2.0
85,73 ±1.1
54,98 ±1.0
57,98 ±2.0
55,43 ±1.2
93,40 ±0.4
97,30 ±0.3
55,93 ±1.8
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 | Tex
%AUROC!
94.05 ±0.4
94.26 ±0.2
94.54 ±0.4
94.88 ±0.4
94.88 ±0.4
95.37 ±0.2
92.93 ±0.5
93.32 ±0.4
92.05 ±0.4
92.05 ±0.4
92.05 ±0.4
92.05 ±0.4
95.13 ±0.4
95.02 ±0.4
95.02 ±0.4
95.02 ±0.4 | tures
%FPR@95J
28.69 \pm 0.5
28.37 \pm 1.2
25.70 \pm 1.1
22.52 \pm 1.1
22.62 \pm 0.8
35.28 \pm 0.8
32.59 \pm 1.6
29.72 \pm 0.9
27.55 \pm 1.5
78.82 \pm 2.1
25.45 \pm 1.1
25.45 \pm 1.1
25.45 \pm 1.1
25.45 \pm 1.1
25.45 \pm 1.1
25.45 \pm 1.1
25.47 \pm 2.4
19.24 \pm 1.3 | Colon
%AUROC1
96.64 ±0.8
96.64 ±0.8
96.707 ±0.7
97.71 ±0.5
97.57 ±0.6
96.51 ±0.8
97.57 ±0.6
96.51 ±0.8
97.71 ±0.5
97.57 ±0.6
98.12 ±0.5
98.12 ±0.5
93.33 ±2.2

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50:5 | $\begin{array}{c} \textbf{Colo} \\ \hline \textbf{Colo} \\ \hline \textbf{W} \textbf{AUROC}^{\dagger} \\ \textbf{96.98} \pm 1.4 \\ \textbf{96.08} \pm 1.7 \\ \textbf{97.61} \pm 1.3 \\ \textbf{95.77} \pm 1.6 \\ \textbf{97.82} \pm 1.1 \\ \textbf{96.76} \pm 1.4 \\ \textbf{95.63} \pm 1.6 \\ \textbf{96.04} \pm 1.5 \\ \textbf{96.04} \pm 1.5 \\ \textbf{96.82} \pm 1.4 \\ \textbf{98.20} \pm 1.1 \\ \textbf{28.41} \pm 8.1 \\ \textbf{98.27} \pm 1.0 \\ \textbf{98.43} \pm 1.1 \\ \textbf{98.25} \pm 0.6 \\ \textbf{98.43} \pm 1.1 \\ \textbf{98.25} \pm 0.6 \\ \textbf{96.43} \pm 1.0 \\ \textbf{98.43} \pm 1.1 \\ \textbf{98.43} \pm 1.0 \\ \textbf{98.43} \pm 1.0 \\ \textbf{98.43} \pm 1.0 \\ \textbf{98.44} \pm 1.0 \\ \textbf{98.43} \pm 1.0 \\ \textbf{98.44} \pm 1.0 \\ \textbf{98.43} \pm 1.0 \\ \textbf{98.44} \pm 1.0 \\ \textbf{98.44} \pm 1.0 \\ \textbf{98.45} \pm 1.0 \\ 98.4$ | $\begin{array}{c} 50.04\pm0.8\\ \hline \\ \hline \\ & \\ \hline \\ \\ & \\ \hline \\ \\ & \\ \hline \\ \\ \\ \hline \\ \\ \hline \\ \\ \\ \hline \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \hline \\ \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \hline \\ \hline \hline \\ \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \hline \hline \\ \hline \hline$ | Ni %AUROC† 98.77 ±1.1 98.645 ±2.5 99.25 ±0.9 96.68 ±2.7 99.07 ±1.2 97.29 ±2.8 96.22 ±2.7 96.45 ±4.5 99.03 ±0.0 49.03 ±1.8.3 98.74 ±0.9 98.33 ±0.8 99.35 ±0.0
 | $\begin{array}{l} \begin{array}{l} 54.11\pm 0.8\\ \hline \\ 9\% FPR 0.95\downarrow\\ \hline 7.61\pm 7.7\\ 24.49\pm 24.8\\ 4.38\pm 5.6\\ 17.55\pm 30.2\\ \hline 21.41\pm 30.2\\ 4.28\pm 6.6\\ 23.31\pm 31.4\\ 19.33\pm 30.7\\ \hline \\ 0.01\pm 0.0\\ \hline 93.66\pm 5.7\\ 3.42\pm 5.1\\ \hline \\ 2.55\pm 4.4\\ \hline 0.00\pm 0.0\\ \hline \end{array}$ | Image
%AUROC1
83.30 ±0.3
84.09 ±0.4
83.36 ±0.3
84.49 ±0.4
83.36 ±0.3
84.49 ±0.4
83.31 ±0.3
83.34 ±0.3
83.34 ±0.3
83.34 ±0.3
83.37 ±0.3
83.77 ±0.3
83.77 ±0.3
83.77 ±0.5
83.07 ±0.4
83.07 ±0.4
83
 | $\begin{array}{c} \underline{99.01 \pm 0.3} \\ \underline{90.11 \pm 0.3} \\ \underline{90.11 \pm 0.3} \\ \underline{90.11 \pm 0.3} \\ \underline{90.11 \pm 0.3} \\ \underline{57.98 \pm 1.2} \\ \underline{57.98 \pm 1.2} \\ \underline{57.98 \pm 1.2} \\ \underline{57.35 \pm 1.6} \\ \underline{53.07 \pm 1.2} \\ \underline{57.87 \pm 1.3} \\ \underline{58.30 \pm 1.2} \\ \underline{57.87 \pm 1.3} \\ \underline{58.30 \pm 1.2} \\ \underline{58.30 \pm 1.2} \\ \underline{66.51 \pm 1.2} \\ \underline{70.89 \pm 2.3} \\ \underline{70.89 \pm 2.3} \\ \underline{59.90 \pm 2.3} \\$ |
| MobileNetV2
ID %Error: 21.35

 | $\begin{tabular}{ c c c c } \hline Method \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (DR, Res.) \\ \hline (DR, Res.) \\ \hline (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \\ Max Logit \\ Energy \\ Gradnorm \\ ViM \\ Mahal \\ \end{tabular}$

 | $\begin{array}{c} \text{II}\\ \% \text{AUROC} \\ 89.53 \pm 0.3\\ 89.67 \pm 0.3\\ 89.60 \pm 0.2\\ 89.60 \pm 0.2\\ 89.60 \pm 0.2\\ 89.12 \pm 0.3\\ 89.57 \pm 0.2\\ 89.64 \pm 0.3\\ 89.57 \pm 0.2\\ 89.64 \pm 0.3\\ 89.55 \pm 0.2\\ 89.55 \pm 0.2\\ 89.55 \pm 0.2\\ 89.64 \pm 0.3\\ 89.57 \pm 0.2\\ 89.64 \pm 0.3\\ 89.57 \pm 0.2\\ 89.64 \pm 0.3\\ 89.57 \pm 0.2\\ 89.5$

 | DX
%FPR@954
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1
55.03 ±1.5
58.43 ±2.2
93.40 ±0.4
67.98 ±2.0
67.98 ±2.0
67.98 ±2.0
85.73 ±1.1
74.36 ±2.1
97.14 ±0.6

 | $\begin{array}{c} {\rm Tex} \\ \% {\rm AUROC} \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.54 \pm 0.4 \\ 94.68 \pm 0.2 \\ 94.68 \pm 0.2 \\ 94.88 \pm 0.4 \\ 95.37 \pm 0.2 \\ 93.32 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.17 \pm 0.2 \\ 95.46 \pm 0.2 \\ 95.47 \pm 0.2 \\$ | tures
(%FPR@95J
28.69 ±0.5
28.37 ±1.2
25.70 ±1.1
22.5.37 ±0.7
<u>25.262 ±0.8</u>
32.59 ±1.6
29.72 ±0.9
27.55 ±1.5
28.42 ±1.1
26.47 ±2.4
19.24 ±1.3
26.00 ±1.6
79.53 ±2.5
26.55 ±1.5
26.47 ±2.4
26.47 ±2.4
27.55 ±1.5
26.47 ±2.4
26.47 ±2.4
26.47 ±2.4
26.47 ±2.4
26.47 ±2.4
26.47 ±2.4
26.47 ±2.47 ±2.4
26.47 ±2.47 ± | Colon
%AUROC?
96.64 ±0.8
96.62 ±0.9
97.07 ±0.7
96.61 ±0.8
97.71 ±0.5
97.57 ±0.6
96.51 ±0.8
96.59 ±0.8
97.82 ±0.5
97.99 ±0.57
27.32 ±6.6
98.12 ±0.5
97.99 ±0.25
93.35 ±2.2
93.62 ±1.5
29 (12 + 7.4)
 | $\begin{array}{l} \textbf{51:50} \\ \textbf{51:50} \\ \textbf{55:50} \\ 55$ | Colo
%AUROC1
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77
±1.6
97.82 ±1.1
96.76 ±1.4
96.64 ±1.5
96.82 ±1.4
98.20 ±1.1
98.23 ±1.4
98.22 ±1.6
98.22 ±1.6
99.25 ±0.6
94.04 ±2.1
30.35 ±81 | $\begin{array}{c} 30.04\pm0.8\\ \text{rectal}\\ \hline & (\text{FPR}695)\\ 19.39\pm8.8\\ 29.21\pm9.2\\ 14.88\pm7.2\\ 26.30\pm9.1\\ 13.78\pm7.6\\ 21.12\pm0.8\\ 22.52\pm3\pm89\\ 21.15\pm0.2\\ 9.40\pm6.4\\ 99.38\pm1.2\\ 9.72\pm7.5\\ 8.65\pm3.2\\ 2.98\pm3.2\\ 13.75\pm1.6\\ 10.95\pm1.6\\ 1$ | $\begin{array}{c} \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{6}\\ \mathbf{N}_{7}\\ \mathbf{N}_{1}\\ \mathbf{N}_{1}\\ \mathbf{N}_{6}\\ \mathbf{N}_{5}\\ \mathbf{N}_{1}\\ \mathbf{N}_{1}\\$ | $\begin{array}{c} 94.11 \pm 0.6 \\ \hline \text{oise} \\ \hline \text{w} \text{FPR}095\downarrow \\ \hline \text{w}
\text{FPR}095\downarrow \\ 7.61 \pm 7.7 \\ 24.49 \pm 24.8 \\ 4.38 \pm 5.6 \\ 21.41 \pm 30.2 \\ 4.28 \pm 6.6 \\ 17.55 \pm 30.2 \\ 26.33 \pm 25.6 \\ 23.31 \pm 31.4 \\ 19.33 \pm 30.7 \\ 0.01 \pm 0.0 \\ 0.01 \pm 0.0 \\ 0.00 \pm 0.0 \\ 19.97 \pm 9.9 \\ 44.62 \pm 5.4 \\ \end{array}$ | Image Mage & AUROC1 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.49 ±0.4 83.93 ±0.3 84.11 ±0.3 83.31 ±0.3 83.31 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 82.36 ±0.7 74.50 ±1.6 87.44 ±0.0 61.28 ±11 | $\begin{array}{l} 99.01 \pm 0.3 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 8 \\ 1.6 \\ \hline \\ 8 \\ 7 \\ 1.6 \\ \hline \\ 8 \\ 1.6 \\ 1.6 \\ \hline \\ 8 \\ 1.6 \\$ |
| MobileNetV2
ID%Error: 21.35

 | $\begin{array}{c c} \textbf{Method} \\ \hline (\text{MSP}, z _1) \\ \textbf{OB}(\textbf{MSP},\text{Res.}) \\ \textbf{OB}(\textbf{R}, z _1) \\ \textbf{OB}, \textbf{Res.} \\ \textbf{MSP} \\ \textbf{DOCTOR} \\ -\mathcal{H} \\ z _1 \\ \textbf{Residual} \\ \textbf{Max Logit} \\ \textbf{Energy} \\ \textbf{Gradnorm} \\ \textbf{ViM} \\ \textbf{Mahal} \\ \end{array}$

 | $\begin{array}{c} 11\\ \% AUROC[^+\\ 89.53 \pm 0.3\\ 89.67 \pm 0.3\\ 89.60 \pm 0.2\\ 89.60 \pm 0.3\\ 88.90 \pm 0.2\\ 89.12 \pm 0.3\\ 88.912 \pm 0.3\\ 89.57 \pm 0.2\\ 89.02 \pm 0.2\\ 53.56 \pm 0.7\\ 41.99 \pm 0.8\\ 83.14 \pm 0.6\\ 81.87 \pm 0.7\\ 65.27 \pm 1.1\\ 80.21 \pm 0.4\\ 44.44 \pm 1.0\\ \end{array}$

 | $\begin{array}{c} \textbf{D}\textbf{\textit{x}} \\ \% \text{FPR} (0.954) \\ 55.51 \pm 1.0 \\ 55.10 \pm 1.4 \\ 55.04 \pm 1.2 \\ 55.64 \pm 1.2 \\ 55.64 \pm 2.1 \\ 55.63 \pm 1.5 \\ 55.43 \pm 2.2 \\ 93.40 \pm 0.4 \\ 97.30 \pm 0.3 \\ 85.43 \pm 1.2 \\ 93.40 \pm 0.4 \\ 97.30 \pm 0.3 \\ 85.73 \pm 1.1 \\ 74.36 \pm 2.1 \\ 97.14 \pm 0.6 \\ \hline \end{array}$

 | $\begin{array}{c} {\rm Tex} \\ \% {\rm AUROC} \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.54 \pm 0.4 \\ 94.68 \pm 0.2 \\ 94.68 \pm 0.2 \\ 94.88 \pm 0.4 \\ 95.37 \pm 0.2 \\ 93.32 \pm 0.4 \\ 93.32 \pm 0.4 \\ 93.32 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.46 \pm 0.2 \\ \overline{58.12 \pm 0.4} \\ 95.47 \pm 0.2 \\ \overline{58.12 \pm 0.4} \\ \end{array}$ | $\begin{array}{c} 1110\\ twres\\ twres\\ twres\\ twres\\ 28.69\pm0.5\\ 28.37\pm1.2\\ 25.70\pm1.1\\ 25.37\pm1.2\\ 25.70\pm1.1\\ 25.37\pm1.2\\ 25.26\pm1.1\\ 22.62\pm0.8\\ 32.59\pm1.6\\ 29.72\pm0.9\\ 27.55\pm1.5\\ 78.82\pm2.1\\ 25.45\pm1.1\\ 26.47\pm2.4\\ 19.24\pm1.3\\ 26.40\pm1.6\\ 19.25\pm1.3\\ 26.40\pm1.6\\ 19.40\pm1.3\\ 26.40\pm1.6\\ 19.40\pm1.3\\ 26.40\pm1.6\\ 19.40\pm1.3\\ 26.40\pm1.6\\ 19.40\pm1.3\\ 26.40\pm1.6\\ 19.40\pm1.3\\ 26.40\pm1.6\\ 19.40\pm1.3\\ 26.40\pm1.3\\ 19.40\pm1.3\\ 26.40\pm1.3\\ 26.$ | Colon
%AUROC!
96.64 ±0.2
96.64 ±0.2
96.65 ±0.9
97.07 ±0.7
96.61 ±0.8
97.71 ±0.5
97.57 ±0.6
96.51 ±0.8
96.59 ±0.8
97.96 ±0.6
98.12 ±0.6
98.12 ±0.6
98.35 ±2.2
93.35 ±2.2
93.62 ±1.5

 | $\begin{array}{l} \textbf{51:50} \\ \textbf{50:60py} \\ \textbf{50:60py} \\ \textbf{50:60px} \\ $ | $\begin{array}{c} \textbf{Colo}\\ \hline \textbf{Colo}\\ \textbf{\%} \textbf{AUROCT}\\ \textbf{96.98} \pm 1.4\\ \textbf{95.45} \pm 1.7\\ \textbf{97.82} \pm 1.1\\ \textbf{95.75} \pm 1.1\\ \textbf{95.63} \pm 1.6\\ \textbf{96.76} \pm 1.4\\ \textbf{95.63} \pm 1.6\\ \textbf{96.76} \pm 1.4\\ \textbf{98.20} \pm 1.1\\ \textbf{28.41} \pm 8.1\\ \textbf{28.41} \pm 8.1\\ \textbf{98.27} \pm 1.0\\ \textbf{98.27} \pm 1.0\\ \textbf{99.25} \pm 0.6\\ \textbf{94.04} \pm 2.1\\ \textbf{30.35} \pm 8.1\\ \end{array}$ | $\begin{array}{c} \textbf{50.04} \pm \textbf{0.5} \\ \textbf{(FPR@95]} \\ \textbf{19.39} \pm \textbf{8.8} \\ \textbf{29.21} \pm \textbf{9.2} \\ \textbf{14.88} \pm \textbf{7.2} \\ \textbf{26.30} \pm \textbf{9.1} \\ \textbf{13.78} \pm \textbf{7.6} \\ \textbf{21.12} \pm \textbf{10.8} \\ \textbf{28.52} \pm \textbf{9.4} \\ \textbf{25.23} \pm \textbf{8.9} \\ \textbf{21.15} \pm \textbf{10.2} \\ \textbf{9.38} \pm \textbf{1.2} \\ \textbf{9.72} \pm \textbf{7.5} \\ \textbf{8.65} \pm \textbf{8.3} \\ \textbf{2.98} \pm \textbf{3.2} \\ \textbf{43.82} \pm \textbf{16.7} \\ \textbf{99.15} \pm \textbf{2.3} \\ \textbf{43.85} \pm \textbf{16.7} \\ \textbf{99.15} \pm \textbf{2.3} \\ \textbf{45.85} \pm \textbf{2.8} \\ \textbf{45.85} \pm \textbf{2.85} \\ \textbf{45.85} \pm \textbf{2.85} \\ \textbf{45.85} + \textbf{2.85} + \textbf{2.85} \\ \textbf{45.85} + \textbf{2.85} + \textbf{2.85} \\ \textbf{45.85} + \textbf{2.85} + \textbf{2.85} + \textbf{2.85} \\ \textbf{45.85} + \textbf{2.85} + $ | $\begin{array}{r} \mathbf{N}_{0}\\ \mathbf{N}_{0}\\$
 | $\begin{array}{c} 94.11\pm 0.08\\ \hline 0.086\\ \hline 0.087\\ \hline$ | Image Mage %AUROC1 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.49 ±0.4 83.93 ±0.3 84.19 ±0.4 83.11 ±0.3 83.31 ±0.3 83.31 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 82.36 ±0.7 74.50 ±1.6 87.44 ±0.0 61.28 ±1.1 | $\begin{array}{l} 99.01 \pm 0.3 \\ \hline 80.01 \\ \hline 80.$ |
| MobileNetV2
ID %Error: 21.35
PopM

 | $\begin{tabular}{ c c c c c } \hline Method \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline (-\mathcal{H}, z _1) \\ Residua \\ Max Logit \\ Energy \\ Gradnorm \\ ViM \\ Mahal \\ \hline Method \\ \hline \end{tabular}$

 | II
%AUROC1
89.53 ±0.3
89.67 ±0.3
89.06 ±0.3
89.06 ±0.3
89.04 ±0.2
89.05 ±0.3
89.05 ±0.2
89.57 ±0.2
89.02 ±0.2
53.56 ±0.7
41.99 ±0.8
83.14 ±0.6
65.27 ±1.1
80.21 ±0.4
44.44 ±1.0
I
%AUROC2

 | Div %FPR@954 55.51 ±1.0 55.10 ±1.4 56.49 ±2.2 55.64 ±2.1 57.85 ±3.1 55.03 ±1.5 55.44 ±2.1 55.84 ±2.1 58.43 ±2.2 93.40 ±0.4 97.30 ±0.3 85.73 ±1.1 74.36 ±2.1 97.14 ±0.6 Dx %FPR@95.

 | Tex
%AUROC1
94.05 ±0.4
94.26 ±0.2
94.54 ±0.4
94.54 ±0.4
94.54 ±0.4
95.37 ±0.2
92.33 ±0.4
94.05 ±0.4
92.88 ±0.3
56.86 ±1.4
95.02 ±0.4
95.02 ±0.495.02 ±0.495.02 ±0.4
95.02 ±0.495.02 ±0.4
95.02 ±0.495.02 ±0.495.02 ±0.4
95.02 ±0.4 | tures (%FPR.095,j 28.69 ±0.5 28.37 ±1.2 25.70 ±1.1 25.70 ±1.1 25.76 ±1.1 25.26 ±1.1 22.62 ±0.8 32.59 ±1.6 29.72 ±0.9 27.55 ±1.5 78.82 ±2.1 25.45 ±1.1 26.47 ±2.4 19.24 ±1.3 26.00 ±1.6 79.53 ±2.3 mean %EPR@95.5 | 44.3 20.1
Colon
%AUROC[
96.64 ±0.8
96.25 ±0.9
97.77 ±0.6
96.51 ±0.8
96.51 ±0.8
96.51 ±0.8
96.51 ±0.8
96.51 ±0.8
96.99 ±0.8
97.63 ±0.6
98.12 ±0.5
97.63 ±0.6
98.12 ±0.5
99.12 ±0.5
29.12 ±1.5
20.33 ±2.2
93.35 ±2.2
93.45 ±1.5
20.12 ±7.4
Near-

 | bits bits oscopy (%FPR@95] 19.38 ±4.8 21.57 ±4.3 15.64 ±3.1 17.89 ±3.8 11.67 ±3.3 12.44 ±3.8 20.36 ±4.6 16.46 ±3.8 12.13 ±3.5 80.70 ±10.1 99.68 ±1.1 99.64 ±4.2 36.23 ±10.0 50.41 ±13.5 99.67 ±1.0 11.42.5 | Colo
%AUROC[
96.98 ±1.4
95.45 ±1.7
97.61 ±1.3
95.77 ±1.6
97.82 ±1.1
96.76 ±1.4
96.76 ±1.4
98.20 ±1.1
28.41 ±8.1
98.27 ±1.0
98.43 ±1.1
99.25 ±0.6
94.04 ±2.1
30.35 ±8.1
Calt | 30.04 ±0.5 7ectal (%FPR@95] 19.39 ±8.8 29.21 ±9.2 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 21.12 ±10.8 9.40 ±6.4 99.38 ±1.2 9.72 ±7.5 2.98 ±3.2 2.98 ±3.2 2.98 ±3.2 2.98 ±3.2 (%FPR@95.5 ±2.2)
 | 40.03 ±12 No %AUROC[98.77 ±1.1 96.45 ±2.5 99.25 ±0.9 96.68 ±2.7 99.07 ±1.2 97.29 ±2.8 96.22 ±2.7 96.46 ±2.9 97.07 ±2.8 99.37 ±0.0 98.74 ±0.9 99.87 ± 1.5 99.95 ±0.00 96.71 ±0.5 51.22 ±15.5 Openi %AUROC[
 | $\begin{array}{c} 94.11 \pm 0.08 \\ \hline \text{oker} & \text{Reg} \\ \text{SFPR} & \text{Reg} \\ 5.11 \pm 0.77 \\ 24.49 \pm 24.8 \\ 4.38 \pm 5.6 \\ 21.41 \pm 30.2 \\ 4.28 \pm 6.6 \\ 21.41 \pm 30.2 \\ 26.33 \pm 25.6 \\ 23.31 \pm 31.4 \\ 1.755 \pm 32.6 \\ 26.33 \pm 25.6 \\ 1.9.33 \pm 32.6 \\ 1.9.34 \pm 32.6 \\$ | Image
MAUROCT
83.30 ±0.3
84.09 ±0.4
83.36 ±0.2
84.49 ±0.4
83.93 ±0.3
83.11 ±0.3
83.34 ±0.3
83.31 ±0.3
83.71 ±0.3
83.77 ±0.3
83.77 ±0.3
83.77 ±0.3
83.77 ±0.3
67.33 ±2.0
59.77 ±1.2
83.02 ±0.6
87.44 ±0.6
61.28 ±1.1
INAt
SAUROCT | 99.01 ±0.3
end{tabular} |
| MobileNetV2
ID %Error: 21.35
PPOW

 | $\begin{tabular}{ c c } \hline Method \\ \hline (MSP, z _1) \\ \cup \\ \bigcup \\ (MSP, Res.) \\ (-H, z _1) \\ (-H, Res.) \\ \hline (-H, Res.) \\ \hline MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \\ Max Logit \\ Energy \\ Gradnorm \\ Vin \\ Mahal \\ \hline \end{tabular}$

 | II
%AUROC1
89.53 ±0.3
89.67 ±0.3
89.06 ±0.3
89.06 ±0.2
89.06 ±0.3
89.02 ±0.2
53.56 ±0.7
41.99 ±0.8
81.34 ±0.6
65.27 ±1.1
80.21 ±0.4
44.44 ±1.0
II
%AUROC2
90.22 ±0.8

 | Dx
%FPR@95,
55.51.0±1.4
55.51.0±1.4
55.61.9±2.2
55.69±2.0
58.64±2.1
57.85±3.1
55.63±1.5
55.48±2.1
97.30±0.3
63.85±1.8
67.98±2.0
97.34.0±2.1
97.14±0.6
Dx
%FPR@95,
52.41±2.7

 | $\begin{array}{c} {\bf Tex} \\ & \& AUROC1 \\ 94.05 \pm 0.4 \\ 94.05 \pm 0.2 \\ 94.26 \pm 0.2 \\ 92.33 \pm 0.4 \\ 95.37 \pm 0.2 \\ 92.33 \pm 0.4 \\ 95.33 \pm 0.4 \\ 95.13 \pm 0.4 \\ 95.14 \pm 0.4 \\ $ | Numes %FPR.095. 28.69 ±.05 28.77 ±12 25.70 ±1.1 25.37 ±1.2 25.26 ±1.1 22.62 ±0.8 35.28 ±0.8 32.59 ±1.6 29.72 ±0.9 27.55 ±1.5 26.47 ±2.4 ±1.3 26.47 ±2.4 ±1.3 26.47 ±2.4 ±1.3 26.00 ±1.6 79.53 ±2.3 D mean %FPR.095.3 38.83 | 44.3 ±0.1 Colon %AUROC[96.54 ±0.9 97.07 ±0.7 96.61 ±0.8 97.71 ±0.5 97.75 ±0.6 97.57 ±0.6 97.57 ±0.6 97.52 ±0.6 98.12 ±0.7 93.35 ±2.12 93.35 ±2.12 93.42 ±0.8 93.62 ±1.5 20.12 ±7.4 Near- %AUROC[%AUROC] \$85.28

 | $\begin{array}{c} 51:55 \\ 1:55 \\ 1:57 \\ 1:57 \\ 1:57 \\ 1:57 \\ 1:564 \\ 1:17 \\ 1:564 \\ 1:17 \\ 1:59 \\ 1:54 \\ 1:15 \\ 1:154 \\ 1$ | Colo %AUROC1 96.98 ±1.4 95.45 ±1.7 96.76 ±1.3 95.77 ±1.6 97.82 ±1.1 96.76 ±1.4 96.04 ±1.5 98.20 ±1.1 98.20 ±1.1 98.20 ±1.1 98.20 ±1.1 98.20 ±1.1 98.20 ±1.1 99.25 ±0.6 94.04 ±2.1 30.35 ±8.1 Calt %AUROC1 91.33 ±0.5 | 30.04 20.8 rectal (%FPR.0954) (%FPR.0954) 14.88 29.21 14.92 20.21 14.92 20.21 14.92 20.21 14.92 21.12 14.88 21.13 13.78 21.13
13.78 22.52 3±.89 9.72 7.75 8.65 ±.33 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.98 ±.3.2 2.915 ±.2.2 ech-45 ·%FPR.0951 ·%FPR.0951 4.0.80 ±.2.0 | $\begin{array}{c} \mathbf{N}_{6}\\ \mathbf{N}_{6}\mathbf{A}\mathbf{UROCC}^{\dagger}\\ 98.77\pm1.1\\ 99.57\pm1.5\\ 99.57\pm1.5\\ 99.55\pm2.5\\ 99.55\pm2.5\\ 99.65\pm2.5\\ 99.07\pm1.2\\ 97.29\pm2.8\\ 96.29\pm2.8\\ 99.07\pm1.2\\ 97.29\pm2.8\\ 99.07\pm2.8\\ 99.93\pm0.0\\ 99.33\pm0.0\\ 99.33\pm0.5\\ 99.93\pm0.0\\ 99.35\pm5.5\\ 51.22\pm15.5\\ 51.22\pm15.5\\ 51.22\pm15.5\\ \mathbf{Openi}\\ \mathcal{S}\mathbf{A}\mathbf{UROC}^{\dagger}\\ 91.88\pm0.4\\ 91.88\pm$ | $\begin{array}{c} 94.11\pm 0.08\\ \hline $ | Inage Mage 83.30 ±0.3 84.00 ±0.4 83.36 ±0.2 84.40 ±0.4 83.36 ±0.3 84.91
±0.3 83.11 ±0.3 83.34 ±0.3 83.34 ±0.3 83.71 ±0.3 67.73 ±2.0 83.02 ±0.6 82.36 ±0.7 82.36 ±0.7 82.36 ±0.7 82.36 ±0.7 82.36 ±0.7 82.36 ±1.1 iNatr %AUROC! 90.35 ±0.6 | $\begin{array}{c} 99.01 \pm 0.3\\ \\ 80.01 \\ \hline 80.0$ |
| Model
ID %Error: 21.35
ID %Error: 21.35

 | Method (MSP, z ,) (MSP,Res.)

 | T
%AUROC1
89.53 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.67 ±0.3
89.57 ±0.2
89.57 ±0.2
89.57 ±0.2
89.57 ±0.2
89.57 ±0.2
89.57 ±0.2
80.57

 | Dx
%FPR@95,
55.51.0±1.4
55.51.0±1.4
55.64.9±2.2
55.69±2.0
55.84.2±1.5
57.85±3.1
57.85±3.1
55.03±1.5
55.48±2.1
58.43±2.2
93.40±0.4
97.30±0.3
67.98±2.0
85.73±1.1
74.36±2.1
97.14±0.6
Dx
%FPR@95,
52.41±2.7
52.42±4.2

 | Tex %4.0ROC1 94.05 ±0.4 94.05 ±0.4 94.56 ±0.2 94.56 ±0.2 94.85 ±0.4 94.85 ±0.4 92.83 ±0.5 93.32 ±0.4 93.32 ±0.4 95.37 ±0.2 92.88 ±0.3 95.04 ±0.4 95.02 ±0.4 95.02 ±0.4 95.02 ±0.4 95.04 ±0.4< | Inres %FPR@95.j 28.69 ±0.5 28.37 ±1.2 25.70 ±1.1 25.37 ±1.2 25.70 ±1.1 22.62 ±0.8 35.28 ±0.8 32.59 ±1.6 29.72 ±0.9 27.55 ±1.5 78.82 ±2.1 26.47 ±2.4 26.00 ±1.6 79.33 ±2.3 Pmean %FPR@95.j 38.83 32.68 | Color
%AUROC[
96.64 ± 0.8
96.25 ± 0.9
97.07 ± 0.7
97.71 ± 0.5
97.57 ± 0.6
96.51 ± 0.8
97.68 ± 0.6
98.12 ± 0.5
98.12 ± 0.5
98.12 ± 0.5
93.33 ± 2.2
93.62 ± 1.5
29.12 ± 7.4
Near-
%AUROC[
85.28 ± 0.1

 | $\label{eq:score} \begin{array}{c} 0.155 & 10.5\\ 0.05 & 0.05 & 0.05\\ 0.05 & 0.05\\ 0.05 & 0.05\\ 0.$ | $\begin{array}{c} \textbf{Coloc} \\ \textbf{Coloc} \\ \textbf{0} \\ \textbf$ | biol tots rectal (%FPR@95] 19.39 ±8.8 29.21 ±9.21 14.88 ±7.2 26.30 ±9.11 14.88 ±7.2 26.30 ±9.11 13.78 ±7.6 21.12 ±10.8 28.52 ±9.4 25.23 ±8.9 9.72 ±7.5 8.65 ±8.3 29.88 ±3.2 20.9.38 ±3.2 40.86 ±8.5 %FPR@95] %FPR@95] who fight 40.51 | $\begin{array}{c} \mathbf{N}_{0}\\ \mathbf{N}_{0}\\$
 | $\begin{array}{c} 94.11\pm 20.8\\ \hline 0.06e\\ \hline \% [FPR.095],\\ 24.49\pm 24.4\\ 4.38\pm 6.6\\ 21.41\pm 23.6\\ 21.41\pm 30.2\\ 4.28\pm 6.6\\ 17.55\pm 30.2\\ 26.33\pm 23.6\\ 26.33\pm 23.6\\ 26.33\pm 23.6\\ 26.33\pm 33.4\\ 30.01\pm 0.0\\ 93.66\pm 5.7\\ 3.342\pm 5.1\\ 2.55\pm 4.4\\ 0.000\pm 0.0\\ 19.07\pm 9.9\\ 94.62\pm 5.4\\ \textbf{mage-O}\\ \hline \% [FPR.095],\\ 43.34\pm 1.4\\ 3.924\pm 1.0\\ \textbf{mage-O}\\ \hline \end{bmatrix}$ | Image Mage 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 83.36 ±0.3 84.99 ±0.4 83.56 ±0.2 83.65 ±0.2 84.99 ±0.4 83.56 ±0.2 83.65 ±0.2 83.95 ±0.3 83.94 ±0.3 83.71 ±0.3 83.71 ±0.3 83.74 ±0.3 61.28 ±1.1 INAtt %AUROCI 93.52 ±0.8 93.42 ±0.7 <td>$\begin{array}{c} 99.05 \ \ \pm 0.3\\ e^{Net-O}\\ & & \\ & \\$</td>
 | $\begin{array}{c} 99.05 \ \ \pm 0.3\\ e^{Net-O}\\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$ |
| MobileN et V2
ID %Error: 21:35
PPOM

 | Method (MSF, z ,) (MSF,Res.) (MISP,Res.) (MISP,Res.) (MISP,Res.) (MISP,Res.) DOCTOR -H MaxLogit Gradhorm VM Mala (MSP, z , (MSP,Res.) (MSP,Res.) (MSP,Res.) (MSP,Res.) (MSP,Res.)

 | $\begin{array}{c} {\bf II}\\ & & \\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ &$

 | Dx
%FPR@954
55.51 ±0.
55.51 ±1.0
55.10 ±1.4
56.49 ±22
55.69 ±20
55.69 ±20
55.69 ±20
55.64 ±21
58.64 ±21
58.64 ±21
58.64 ±21
97.30 ±0.3
67.98 ±20
85.73 ±1.1
74.36 ±21
97.14 ±0.6
Dx
%FPR@95,
52.41 ±27
52.42 ±22
52.54 ±2.2

 | Tex
%AUROC1
94.05 ±0.4
94.26 ±0.2
94.26 ±0.2
94.26 ±0.2
94.26 ±0.2
94.26 ±0.2
94.26 ±0.2
94.26 ±0.2
94.48 ±0.4
95.07 ±0.2
92.28 ±0.3
95.13 ±0.4
95.07 ±0.2
95.13 ±0.4
95.07 ±0.2
95.14 ±0.4
95.07 ±0.2
95.07 ±0.2
95.0 | $\begin{array}{c} & \text{WFPR}(0.95, 1\\ & \text{WFPR}(0.95, 2\\ & WF$ | $\begin{array}{c} 0_{41,31} = \underline{0}_{20,11} \\ \hline \mathbf{Colom} \\ 0_{64} \mathbf{UROC}_1^{-1} \\ 0_{66} 0_{41,08} \\ 0_{62,25} \pm 0_{90} \\ 0_{70,71} \pm 0_{20,71} \\ 0_{90,99} \pm 0_{20,71} \\ 0_{90,99} \pm 0_{20,8} \\ 0_{90,99} \\ 0_{90,99} \\ 0_{90,99} \\ 0_{90,99} \\$
 | $\begin{array}{l} 51.5 \\ 51.5
\\ 51.5 \\ 51$ | Colo %AUROC1 96.98 ± 1.4 96.98 ± 1.4 95.45 ± 1.7 97.61 ± 1.3 97.61 ± 1.3 96.76 ± 1.4 96.78 ± 1.1 96.78 ± 1.1 96.78 ± 1.1 96.78 ± 1.1 96.82 ± 1.1 98.22 ± 1.1 98.22 ± 1.1 98.23 ± 1.1 99.25 ± 5.4 99.25 ± 5.4 99.25 ± 5.4 99.25 ± 6.4 99.25 ± 6.4 99.25 ± 6.4 99.25 ± 6.4 99.25 ± 6.4 99.25 ± 6.4 99.25 ± 6.4 99.26 ± 6.5 91.63 ± 0.5 91.63 ± 0.5 | 20.04 ±0.05 metal %FPR(095) 19.39 ±8.8 29.21 ±9.2 29.21 ±9.2 24.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 28.52 ±9.4 92.33 ±1.2 99.38 ±1.2 20.8 ±3.2 20.8 ±3.2 20.8 ±3.2 20.8 ±4.2 40.80 ±10.7 90.72 ±7.5 20.98 ±3.2 20.98 ±3.2 20.8 ±4.2 40.80 ±0.0 40.51 ±1.6 40.51 ±1.6 40.51 ±1.6 40.51 ±1.6
 | $\begin{array}{c} \mathbf{N}\\ \mathbf{N}\\$ | $\begin{array}{l} 94.11\pm 0.08\\ \hline $ | Inage Margage %AUROC1 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.49 ±0.4 83.51 ±0.3 84.19 ±0.4 83.31 ±0.3 83.31 ±0.3 83.34 ±0.3 83.31 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.02 ±0.6 87.44 ±0.6 61.28 ±1.1 INAtt %AUROC1 93.42 ±0.7 93.42 ±0.7 93.82 ±0.7 | $\begin{array}{l} 99.01 \ \ \frac{1}{2}.0.3\\ excepted \\ excepted \\$ |
| MobileNetV2
ID %Error: 21.35
MOP

 | $\begin{tabular}{ c c c c c c c c c c$

 | T
%AUROC [†]
89.05 ±0.3
89.07 ±0.3
89.04 ±0.2
89.07 ±0.3
89.04 ±0.2
89.07 ±0.3
89.05 ±0.3
89.05 ±0.3
89.05 ±0.2
89.07 ±0.2
89.0

 | Dx
%FPR@951
55.51 ±1.0
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1
55.43 ±2.2
93.40 ±0.4
97.30 ±0.3
63.85 ±1.8
67.98 ±2.0
67.98 ±2.0
67.98 ±2.0
67.98 ±2.0
97.43 ±0.4
97.43 ±0.4
97.44 ±0.44

 | Tex %4.0FROC1 94.05 ±0.4 94.26 ±0.2 94.26 ±0.2 94.26 ±0.2 94.26 ±0.2 92.33 ±0.5 93.32 ±0.4 92.33 ±0.5 93.22 ±0.4 95.13 ±0.4 95.13 ±0.4 95.46 ±0.2 95.47 ±0.2 95.46 ±0.2 91.68 92.88 91.68 91.68 91.99 91.99 91.99 91.99 92.04 | $\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$ | Marcing Sector Colom %AUROCCI 96.64 ± 0.8 96.25 ± 0.9 97.07 ± 0.7 96.61 ± 0.8 97.71 ± 0.5 97.71 ± 0.5 97.57 ± 0.6 96.59 ± 0.8 97.57 ± 0.6 96.99 ± 0.8 97.90 ± 5.7 93.35 ± 2.2 93.62 ± 1.5 29.12 ± 7.4 Near %AUROC? 85.28 ± 0.1 85.14 ± 0.1 85.24 ± 0.1 85.24 ± 0.1 85.24 ± 0.1 85.24 ± 0.1

 | $\begin{array}{c} 57.55\\ 57.55\\ 57.55\\ 57.45\\ 57.55\\ 57.45\\ 57.55\\ 57.45\\ 57.55\\ 57.45\\ 57.55\\ 57.45\\ 57.55\\ 57.45\\ 57.55\\ 57.45\\ 57.55\\ 57$ | $\begin{array}{c} \textbf{Colo} \\ \hline \textbf{Colo} \\ & \% AUROC \\ \\ & \% AUROC \\ \\ & 96.98 \pm 1.4 \\ \\ & 95.45 \pm 1.7 \\ \\ & 97.63 \pm 1.6 \\ \\ & 97.82 \pm 1.1 \\ \\ & 96.76 \pm 1.4 \\ \\ & 96.04 \pm 1.5 \\ \\ & 96.04 \pm 1.5 \\ \\ & 96.04 \pm 1.5 \\ \\ & 96.02 \pm 1.1 \\ \\ & 98.22 \pm 1.4 \\ \\ & 98.22 \pm 1.1 \\ \\ & 98.22 \pm 1.4 \\ \\ & 98.22 \pm 1.1 \\ \\ & 98.22 \pm 1.4 \\ \\ & 98.23 \pm 1.6 \\ \\ & 91.33 \pm 0.5 \\ \\ & 91.33 \pm 0.5 \\ \\ & 91.33 \pm 0.5 \\ \\ & 91.53 \pm 0.5 \\ \\ & 91.54 \pm 0.55 \\ \\ & 91.54 \pm$ | 20.04 20.05 rectal %FPR@95.1 19.39 ±8.8 29.21 ±9.2 29.21 ±9.2 20.30 ±9.1 14.88 ±7.2 26.30 ±9.1 13.78 ±7.6 21.12 ±10.8 9.92 ±9.2 26.30 ±9.1 13.78 ±7.6 9.05 ±2.1 9.90.38 ±1.2 9.93.8 ±3.2 9.93.8 ±3.2 9.91.5 ±2.2 cet-45 %FPR@95.1 40.80 ±2.0 40.81 ±1.6 37.15<±1.1
 | $\begin{array}{c} \mathbf{N}\\ \mathbf{N}\\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$ | $\begin{array}{c} 9.1.11 \\ \underline{0}.516 \\ \hline \\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$
 | Image Manage %AUROC[83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.09 ±0.4 83.35 ±0.3 84.91 ±0.3 83.31 ±0.3 83.31 ±0.3 83.31 ±0.3 83.31 ±0.3 83.31 ±0.3 83.34 ±0.3 83.34 ±0.3 83.34 ±0.3 83.7 ±0.3 67.33 ±2.0 83.02 ±0.6 82.36 ±0.7 74.50 ±1.6 87.44 ±0.60 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.42 ±0.7 93.44 ±0.7 93.45 ±0.7 94.16 ±0.7 | $\begin{array}{c} 99.05 \ \frac{1}{2} 0.3 \\ 8.04-O \\ & \% FPR.095 \downarrow \\ 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 56.83 \pm 1.6 \\ 53.07 \pm 1.2 \\ 57.35 \pm 1.6 \\ 53.07 \pm 1.2 \\ 59.05 \pm 1.3 \\ 57.87 \pm 1.3 \\ 57.87 \pm 1.3 \\ 58.30 \pm 1.2 \\ 58.30 \pm 1.2 \\ 58.30 \pm 1.2 \\ 52.09 \pm 2.3 \\ 52.09 \pm 2.3 \\ 52.09 \pm 2.3 \\ 52.09 \pm 2.3 \\ 55.84 \pm 1.3 \\ 55.88 \pm 1.9 \\ 35.88 \pm 1.9 \\ 31.05 \pm 2.0 \\ 32.08 \pm 1.9 \\ 32.08 \pm 1.9 \\ 320.28 \pm 1.0 \\ \end{array}$ |
| 11 MobileNetV2 [apow]

 | $\begin{tabular}{ c $

 | T
%AUROC?
89.53 ±0.3
89.64 ±0.3
89.04 ±0.2
89.12 ±0.3
89.04 ±0.3
89.04 ±0.2
89.12 ±0.3
89.57 ±0.2
89.12 ±0.3
89.57 ±0.2
89.02 ±0.2
53.56 ±0.7
41.99 ±0.8
83.14 ±0.6
81.87 ±0.7
65.27 ±1.1
80.21 ±0.4
44.44 ±1.0
10
%AUROC
90.22 ±0.8
89.02 ±0.2
90.22 ±0.8
89.02 ±0.2
90.22 ±0.8
89.02 ±0.2
90.22 ±0.8
89.02 ±0.2
90.22 ±0.8
89.02 ±0.2
90.22 ±0.8
89.02 ±0.2
90.21 ±0.8
90.21 ±0.8
90.8 ±0.8
90.8 ±0.8
90.92 ±0.8
90.8 ±0.8
90.92 ±0.

 | DX
%FPR@95.
55.51 ±1.0
55.51 ±1.0
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
55.69 ±2.0
55.69 ±2.0
55.63 ±2.1
55.43 ±2.2
93.40 ±0.4
97.30 ±0.3
97.30 ±0.3
97.34 ±0.6
02.85 ±1.8
67.98 ±2.0
85.73 ±1.1
74.36 ±2.1
97.14 ±0.6
DX
72.42 ±2.2
52.42 ±4.2
52.24 ±2.4
52.24 ±2.4
52.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45 ±2.44 ±2.45

 | Tex %AUROC1 94.05 ±0.4 94.05 ±0.2 94.26 ±0.2 94.26 ±0.2 94.68 ±0.2 95.37 ±0.2 92.33 ±0.5 95.13 ±0.4 95.02 ±0.4 95.13 ±0.4 95.13 ±0.4 95.47 ±0.5 85.12 ±1.6 OOII 1 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | Numes %FPR@954 28.69 ±0.5 28.37 ±1.2 25.70 ±1.1 22.62 ±0.8 32.52 ±0.8 32.52 ±0.8 32.52 ±0.8 29.7 ±2.9 27.55 ±1.5 78.82 ±2.1 25.54 ±2.1 26.54 ±1.1 26.47 ±2.4 19.24 ±1.3 26.00 ±1.6 79.33 ±2.3 Dmean %FPR@95, 38.83 35.30 29.68 32.92 29.63 32.92 29.63 32.92 29.63 32.92 29.63 32.92 32.92 32.92 32.92 29.68 32.92 27.97 | Mark 20.1 Colom Colom %AUROC1 96.64 ± 0.8 96.7 ± 0.7 96.7 ± 0.7 97.67 ± 0.7 97.67 ± 0.6 97.71 ± 0.5 97.57 ± 0.6 96.51 ± 0.8 96.99 ± 0.8 97.68 ± 0.6 79.99 ± 0.8 97.39 ± 6.6 79.99 ± 0.8 93.35 ± 22 93.62 ± 1.5 20.12 ± 7.4 Near- %AUROC1 85.28 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1 85.48 ± 0.1

 | $\begin{array}{l} & 51.55 \\ & 50.50 \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ $ | Colo %AUROC1 %6.98 ± 1.4 96.98 ± 1.4 95.45 ± 1.7 97.61 ± 1.3 95.77 ± 1.6 97.82 ± 1.1 96.62 ± 1.4 98.04 ± 1.5 96.62 ± 1.4 98.04 ± 1.5 96.63 ± 1.4 98.24 ± ± 1.1 98.27 ± 1.0 98.27 ± 1.0 99.25 ± 0.6 91.33 ± 1.1 99.25 ± 0.6 91.33 ± 0.5 91.33 ± 0.5 91.53 ± 0.5 91.53 ± 0.5 92.15 ± 0.4 92.13 ± 0.4 | 9004 ±0.5 Prectal %FPR@954 9.31 ±0.5 9.21 ±0.2 9.21 ±0.2 9.21 ±0.2 1.12 ±10.8 21.12 ±10.8 25.03 ±9.1 13.78 ±7.6 21.15 ±10.2 9.40 ±6.4 99.38 ±1.2 99.15 ±2.2 ech-45 %FPR@954 %FPR@955 40.80 ±2.0 40.51 ±1.6 36.84 ±1.4 34.14 ±1.7
 | $\begin{tabular}{ c c c c c } \hline N & V & $V$$ | $\begin{array}{c} 54.11 \\ 1205 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $
 | Inage Margage %AUROC1 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.90 ±0.4 83.93 ±0.3 84.91 ±0.4 83.31 ±0.3 83.31 ±0.3 83.34 ±0.3 83.77 ±0.3 83.77 ±0.3 83.02 ±0.6 83.02 ±0.6 67.35 ±0.7 93.52 ±0.8 93.42 ±0.7 93.42 ±0.7 93.69 ±0.7 94.16 ±0.7 94.07 ±0.6 | $\begin{array}{c} 93.05 \hspace{0.1cm} \pm 10.3 \\ \$ Net-O \\ \% [FPR 0.05], \\ 57.98 \hspace{0.1cm} \pm 1.2 \\ 55.02 \hspace{0.1cm} \pm 1.7 \\ 56.83 \hspace{0.1cm} \pm 1.2 \\ 57.53 \hspace{0.1cm} \pm 1.2 \\ 57.53 \hspace{0.1cm} \pm 1.2 \\ 57.53 \hspace{0.1cm} \pm 1.3 \\ 57.87 \hspace{0.1cm} \pm 1.3 \\ 58.05 \hspace{0.1cm} \pm 1.3 \\ 57.87 \hspace{0.1cm} \pm 1.3 \\ 58.05 \hspace{0.1cm} \pm 1.3 \\ 57.87 \hspace{0.1cm} \pm 1.3 \\ 57.85 \hspace{0.1cm} \pm 1.3 \\ 57.85 \hspace{0.1cm} \pm 1.2 \\ 52.09 \hspace{0.1cm} \pm 2.0 \\ 87.74 \hspace{0.1cm} \pm 1.1 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 1$ |
| -121 MobileNetV2 MobileNetV2 [17:20]

 | Method Method (MSP, x , [18]

 | $\begin{array}{c} {} {} {} {} {} {} {} {} {} {} {} {} {}$

 | Dx
%FPR@951
55.51 ±1.0
55.51 ±1.10
55.10 ±1.4
56.49 ±2.2
55.69 ±2.0
58.64 ±2.1
55.63 ±1.15
55.43 ±2.2
93.40 ±0.4
97.30 ±0.3
97.30 ±0.3
97.30 ±0.3
97.30 ±0.3
97.31 ±0.3
67.98 ±2.0
67.98 ±2.0
67.98 ±2.0
67.98 ±2.0
97.43 ±0.4
97.43 ±0.4
97.44 ±0.4

 | Tex %AUROC1 94.05 ±0.4 94.26 ±0.2 94.26 ±0.2 94.26 ±0.2 94.26 ±0.2 94.85 ±0.2 95.37 ±0.2 92.33 ±0.5 93.32 ±0.4 92.45 ±0.4 92.83 ±0.5 95.13 ±0.4 95.02 ±0.4 95.02 ±0.4 95.02 ±0.4 95.46 ±0.2 58.12 ±1.6 OOII 1 %AUROCC 91.69 92.41 93.42 93.44 | Numes %FPR@954 28.69 ±0.5 28.37 ±1.2 25.70 ±1.1 25.23 ±0.7 25.24 ±0.3 32.59 ±1.6 29.72 ±0.9 27.55 ±1.5 78.82 ±2.1 25.44 ±1.3 26.04 ±1.4 19.24 ±1.3 26.04 ±1.4 26.04 ±1.4 19.24 ±1.3 26.04 ±1.6 38.83 32.53 29.63 32.53 29.62 20.02 ±1.6 20.02 ±1.6 21.63 ±2.3 9.88.83 22.68 23.5.30 29.22 ±1.2 20.92 ±2.2 21.92 ±1.3 22.92 ±2.2 22.92 ±2.2 22.92 ±2.2 23.5.30 29.62 ±2.2 27.97 ±0.40 | $\begin{array}{c} \mathbf{Color}\\ \mathbf{Color}\\ \mathbf{S}_{4} \mathbf{UROC}^{\dagger}\\ \mathbf{S}_{6} \mathbf{C}_{5} \mathbf{S}_{40}\\ \mathbf{S}_{6} \mathbf{S}_{5} \mathbf{S}_{40}\\ \mathbf{S}_{6} \mathbf{S}_{5} \mathbf{S}_{40}\\ \mathbf{S}_{6} \mathbf{S}_{5} \mathbf{S}_{40}\\ \mathbf{S}_{6} \mathbf{S}_{1} \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{6}\\ \mathbf{S}_{6} \mathbf{S}_{1} \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{6}\\ \mathbf{S}_{6} \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{2}\\ \mathbf{S}_{7} \mathbf{S}_{2} \mathbf{S}_{4} \mathbf{S}_{6}\\ \mathbf{S}_{7} \mathbf{S}_{2} \mathbf{S}_{4} \mathbf{S}_{6}\\ \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{2} \mathbf{S}_{2}\\
\mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{1} \mathbf{S}_{2}\\ \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{1} \mathbf{S}_{2}\\ \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{2} \mathbf{S}_{2}\\ \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{2} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{2} \mathbf{S}_{2} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{2} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{1} \mathbf{S}_{2} \mathbf{S}_{1} \mathbf{S}_{1}\\ \mathbf{S}_{2} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{4} \mathbf{S}_{1} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{4} \mathbf{S}_{1} \mathbf{S}_{1} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{4} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{5} \mathbf{S}_{5} \mathbf{S}_{5} \mathbf{S}_{5} \mathbf{S}_{5} \mathbf{S}_{5} \mathbf{S}_{1}\\ \mathbf{S}_{5} \mathbf{S}_{5$
 | Site Site %FPR@95[19.38 ± 4.8 21.57 ± 4.3 15.64 ± 3.1 15.64 ± 3.1 15.64 ± 3.1 17.89 ± 3.8 20.36 ± 4.6 18.64 ± 3.1 12.13 ± 3.5 20.36 ± 4.6 18.46 ± 3.8 10.64 ± 3.2 30.63 ± 1.0 50.41 ± 1.35 50.41 ± 1.35 50.45 ± 1.7 57.49 ± 1.9 57.49 ± 1.9 57.49 ± 1.9 57.50 ± 3.2 56.69 ± 1.7 57.49 ± 1.9 57.49 ± 1.9 57.90 ± 1.8 57.90 ± 1.8 | Colo %AUROC1 %6.98±1.4 96.54±1.7 97.61±1.3 97.76±1.6±1.3 97.76±1.6±1.3 96.76±1.4±1.3 96.76±1.4±1.3 96.76±1.4±1.3 96.62±1.4±1.3 98.22±1.4±8 98.22±1.4±3 98.43±1.1 99.25±0.6 91.33±0.5 91.23±0.5 91.63±0.5 91.63±0.5 91.63±0.5 92.18±0.4 92.18±0.4 92.18±0.4 91.31±0.5 92.18±0.4 92.18±0.4 91.31±0.5 | $\begin{array}{c} 3004\ 1205\\ 8004\ 1930\ 1845\\ 8004\ 1930\
1930\ 1930\$ | $\begin{array}{c} \mathbf{N}, \mathbf{N}\\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$
 | $\begin{array}{c} 9.1.11 \\ \hline 0.101 \\ $ | Image Image %AUROC[83.30 ±0.3 84.09 ±0.4 83.30 ±0.3 84.09 ±0.4 83.30 ±0.3 84.19 ±0.4 83.31 ±0.3 83.31 ±0.3 83.31 ±0.3 83.31 ±0.3 83.77 ±0.3 83.77 ±0.5 83.77 ±0.5 83.74 ±0.6 87.44 ±0.6 93.52 ±0.8 93.42 ±0.7 93.55 ±0.7 93.65 ±0.7 93.45 ±0.7 93.45 ±0.7 93.43 ±0.3 93.416 ±0.5 94.16 ±0.3 93.33 ±0.7 | $\begin{array}{c} 99.05 \;\; \pm 0.3 \\ 8.Net-O \\ \% FPR @ 95, \downarrow \\ 57.98 \; \pm 1.2 \\ 55.02 \; \pm 1.7 \\ 56.33 \; \pm 1.6 \\ 53.07 \; \pm 1.2 \\ 57.35 \; \pm 1.6 \\ 53.07 \; \pm 1.2 \\ 57.35 \; \pm 1.3 \\ 57.87 \; \pm 1.3 \\ 58.30 \; \pm 1.2 \\ 80.74 \; \pm 3.0 \\ 87.74 \; \pm 1.1 \\ 10.52 \; \pm 0.9 \; \pm 2.3 \\ 87.74 \; \pm 1.1 \\ 10.52 \; \pm 0.9 \; \pm 2.3 \\ 52.09 \; \pm 2.0 \\ 87.74 \; \pm 1.1 \\ 10.52 \; \pm 0.9 \; \pm 2.3 \\ 35.88 \; \pm 1.9 \\ 31.95 \; \pm 2.0 \\ 32.08 \; \pm 1.0 \\ 32.08 \; \pm 1.0 \\ 32.08 \; \pm 1.0 \\ 30.023 \; \pm 2.7 \\ 30.023 \; \pm 1.2 \\ 30.023 \; \pm 1.0 \\ 30.02$ |
| Net-121 MobileNetV2 rot: 17,20 pp 0 ID %Error: 21.35 pp 0

 | Method (MSF, z). OUSP,Res.) OUSP,Res.) OUSP,Res.) OUSP,Res.) OUSP,Res.) OUTOR H. I. Maha Maha I. Method (MSP,III). OUTOR. OUTOR H IIII. OUTOR. OUTOR. OUTOR. OUTOR. OUTOR. OUTOR. (MSP,Bes.) (-H. z). (-H. z). MSP DOCTOR MSP DOCTOR

 | $\begin{array}{c} {\bf Tr} \\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & $

 | $\begin{array}{c} \hline \textbf{Dx} \\ & & & & \\ & & & \\ &$

 | $\begin{tabular}{ c c c c c } \hline Tex & & & & & & & & & & & & & & & & & & &$ | Stress %FPR@51 28.66 ± 4.05 28.77 ± 1.2 25.70 ± 1.1 25.74 ± 0.7 25.26 ± 1.1 22.62 ± 0.8 35.28 ± 0.8 32.59 ± 1.6 29.72 ± 0.9 27.55 ± 1.5 25.45 ± 1.1 26.47 ± 2.4 19.24 ± 1.3 26.40 ± 1.6 38.83 32.68 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.98 32.99 32.99 32.92 27.97 40.44 36.95
 | $\begin{array}{c} \mathbf{Color}\\ \mathbf{Color}\\$
 | $\begin{array}{l} & 57.50 \\ & 50.500py \\ & \% FPR @95_4 \\ & 19.38 \\ \pm 4.8 \\ & 12.157 \\ \pm 4.3 \\ & 15.64 \\ \pm 3.1 \\ & 17.89 \\ \pm 3.8 \\ & 11.67 \\ & 1$ | $\begin{array}{c} \hline {\bf Colo}\\ \hline {\bf S}_{4}UROC^{\dagger}\\ 96.98\pm1.4\\ 95.45\pm1.7\\ 97.61\pm1.3\\ 95.67\pm1.6\\ 97.52\pm1.1\\ 95.67\pm1.6\\ 96.76\pm1.4\\ 95.63\pm1.6\\ 96.82\pm1.4\\ 98.20\pm1.1\\ 28.41\pm8.1\\ 98.20\pm1.1\\ 28.41\pm8.1\\ 98.20\pm1.4\\ 99.25\pm0.4\\ 99.25\pm0.4\\ 99.25\pm0.4\\ 99.25\pm0.4\\ 99.21\pm0.4\\ 99.21\pm0.4\\ 99.21\pm0.4\\ 99.15\pm0.4\\ 91.5\pm0.4\\ $ | $\begin{array}{c} 3004\ 2005\\ 8607\ 3007\$ | No. No. No. % AUROC1 No. % AUROC1 98.77 ± 1.1 90.45 ± 2.5 99.25 ± 0.0 90.64 ± 2.2 99.07 ± 1.2 97.07 ± 2.8 99.22 ± 2.2 96.24 ± 2.5 96.24 ± 2.5 90.64 ± 2.9 97.07 ± 2.8 99.93 ± 0.0 99.71 ± 1.8 99.95 ± 0.0 99.71 ± 1.5 51.2 ± 1.6 91.85 ± 0.4 92.55 ± 0.2 92.55 ± 0.2 92.55 ± 0.5 92.16 ± 0.4 93.16 ± 0.4 91.78 ± 0.4 91.78 ± 0.4 92.73 ± 0.4 92.03 ± 0.0
 | $\begin{array}{l} 94.11 \\ 10.05 \\ \hline \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ &$ | Image Image %AUROC[83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.40 ±0.4 83.33 ±0.3 84.41 ±0.4 83.31 ±0.3 83.31 ±0.3 83.34 ±0.3 83.34 ±0.3 83.77 ±0.3 83.77
±0.3 83.77 ±0.5 83.77 ±0.5 83.77 ±0.5 83.74 ±0.6 61.28 ±1.1 Natr %AUROC1 93.52 ±0.8 93.42 ±0.7 93.69 ±0.7 94.16 ±0.2 94.16 ±0.2 93.60 ±0.7 | $\begin{array}{c} 99.05 \;\; \pm 0.23\\ \text{SNELO}\\ & \% \text{[FPR @ 95, 1]}\\ 55.02 \pm 1.7\\ 56.83 \pm 1.6\\ 55.02 \pm 1.7\\ 56.83 \pm 1.6\\ 52.49 \pm 2.2\\ 57.35 \pm 1.6\\ 53.07 \pm 1.2\\ 59.05 \pm 1.3\\ 57.87 \pm 1.3\\ 58.30 \pm 1.2\\ 58.307 \pm 1.2\\ 58.308 \pm 1.2\\ 35.588 \pm 1.2$ |
| seNot-121 MobileN et V2 Mobile

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 | $\begin{array}{c} & \mathbf{T}\\ & & & \\ &$

 | $\begin{array}{c} \hline \textbf{Dx} \\ & & & \\ & & \\ & & \\ & \\ & \\ & \\ & \\ $

 | $\begin{array}{c} \textbf{Tex} \\ & & & & \\ & & & \\ & $ | Stress %FPR0954 %FPR0954 28.69 ±0.5 28.37 ±1.2 25.70 ±1.1 25.67 ±0.7 25.64 ±1.2 22.62 ±0.8 35.25 ±1.6 29.72 ±0.9 27.55 ±1.5 26.64 ±2.4 19.24 ±1.3 26.04 ±1.4 19.24 ±1.3 26.04 ±1.4 19.24 ±1.3 26.04 ±1.4 9.75 ±1.1 26.04 ±1.6 27.63 ±2.3 mean 32.26 32.99 27.97 40.44 36.95 32.99 27.97 40.44 36.49 | Mark Solution Colom % AUROC1 06.04 4.0.8 96.64 4.0.8 97.77 4.0.7 97.67 4.0.6 96.71 4.0.8 97.71 4.0.6 96.61 4.0.8 97.71 4.0.6 96.61 4.0.8 97.57 4.0.6 97.57 24.0.6 97.57 29.12 93.35 22.12 93.35 22.2 93.42 21.5 20.12 27.4 %AUROCC 85.28 85.18 4.0.1 85.54 4.0.1 85.54 4.0.1 85.54 4.0.1 85.54 4.0.1 85.54 4.0.1 85.74 4.0.1 85.74 4.0.1

 | Size Size %FPR@954 19.38 ±4.8 21.57 ±4.3 11.67 ±3.8 15.64 ±3.1 17.89 ±3.8 11.67 ±3.3 15.64 ±3.1 12.44 ±3.8 12.13 ±3.5 80.70 ±1.0 19.64 ±3.2 9.64 ±3.7 10.64 ±3.2 9.64 ±3.7 10.64 ±3.2 9.64 ±3.7 10.64 ±3.2 9.64 ±3.7 10.64 ±3.2 9.64 ±1.0 10.64 ±3.7 9.64 ±1.0 10.64 ±3.7 9.64 ±1.0 10.64 ±3.7 9.64 ±1.0 10.64 ±3.7 10.64 ±3.2 59.65 ±1.7 57.98 ±2.6 56.98 ±1.8 57.99 ±1.8 57.90 ±1.8 57.01 ±1.2 57.01 ±1.2 | Colo %AUROC1 96.98 ± 1.4 96.98 ± 1.4 95.45 ± 1.7 97.61 ± 1.3 97.76 ± 1.6 97.82 ± 1.1 96.76 ± 1.4 95.63 ± 1.6 96.76 ± 1.4 98.04 ± 1.5 98.04 ± 1.5 98.24 ± 1.4 99.25 ± 0.6 94.04 ± 2.1 01.29 ± 0.5 91.63 ± 0.5 91.23 ± 0.5 91.23 ± 0.5 91.23 ± 0.5 91.23 ± 0.5 91.23 ± 0.5 91.23 ± 0.5 91.21 ± 0.4 | $\begin{array}{c}
3004 \ z_{10} \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ $ | No. N %AUROC1 98.77±1.1 96.45±2.5 99.645±2.5 99.72±2.42 96.68±2.2 99.72±2.42 96.64±2.9 99.72±2.42 96.64±2.9 99.72±2.42 99.93±0.0 99.94 99.95±0.0 99.95±0.0 99.96.71±0.5 51.22±1.5 Openi %AUROC1 91.84±0.4 92.55±0.3 92.55±0.3 92.63±0.4 91.78±0.4 92.78±0.4 92.78±0.4 92.78±0.4 92.78±0.4 92.78±0.4 92.78±0.4 92.78±0.4 92.78±0.4 92.43±0.5 92.43±0.5
 | $\begin{array}{l} \begin{array}{l} & \text{31.11} \\ \text{32.11} \\ \hline \\ & \text{$$ $ \ensuremath{\mathbb{R}}$ PR 095; \\ \hline \\ & 7.61 \pm 7.7 \\ & 4.38 \pm 3.0 \\ & 4.38 \pm 3.0 \\ & 4.38 \pm 3.0 \\ & 2.63 \pm 3.0 \\ & 2.63 \pm 3.0 \\ & 2.63 \pm 3.2 \\ & 3.31 \pm 3.1 \\ & 2.55 \pm 4.4 \\ & 0.00 \pm 4.0 \\ & 9.342 \pm 5.1 \\ & 3.42 \pm 1.0 \\ & 3.42 \pm 1.0 \\ & 3.43 \pm 1.0 \\ & 3.43 \pm 1.0 \\ & 3.63 \pm 2.0 $ | Image Image %AUROC1 83.30 ±0.3 84.09 ±0.4 83.56 ±0.2 84.09 ±0.4 83.05 ±0.3 83.10 ±0.3 83.10 ±0.3 83.11 ±0.3 83.17 ±0.3 61.33 ±2.0 83.04 ±0.3 83.07 ±0.3 61.28 ±1.1 %AUROC1 93.52 ±0.8 93.42 ±0.7 93.69 ±0.7 94.06 ±0.7 94.07 ±0.6 94.07 ±0.6 94.00 ±0.7 | $\begin{array}{c} 90.01 \\ \pm 0.01 \\ \% {\rm FPR 0951} \\ 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 56.33 \pm 1.4 \\ 55.02 \pm 1.7 \\ 56.33 \pm 1.4 \\ 57.55 \pm 1.6 \\ 57.55 \pm 1.6 \\ 59.05 \pm 1.3 \\ 57.57 \pm 1.3 \\ 58.30 \pm 1.2 \\ 80.74 \pm 2.0 \\ 87.83 \pm 0.7 \\ 66.51 \pm 1.2 \\ 70.89 \pm 2.0 \\ 87.84 \pm 1.2 \\ 52.00 \pm 2.0 \\ 87.84 \pm 1.0 \\ 35.58 \pm 2.8 \\ 52.00 \pm 2.0 \\ 87.74 \pm 1.1 \\ 1.3 \\ 52.00 \pm 2.0 \\ 87.74 \pm 1.1 \\ 1.3 \\ 52.00 \pm 2.0 \\ 87.74 \\ 35.88 \pm 1.0 \\ 31.05 \pm 2.0 \\ 30.28 \pm 1.0 \\ 31.05 \pm 2.0 \\ 30.28 \pm 1.0 \\ 30.28 \pm 1.0$ |
| D %Error: 17.20 0 MobileNetV2

 | Method (MSF, z). (MSF, z .) (MSF,Res.) (M

 | $\begin{array}{c} {} {} {} {} {} {} {} {} {} {} {} {} {}$
 | $\begin{array}{c} \hline \textbf{D}\textbf{X}
\\ & & & & & & \\ & & & & \\ & & & & \\ \hline \textbf{X}FPR0951} \\ & & & \\ \hline \textbf{55.11} \pm 1.6 \\ & & \\ \hline \textbf{55.11} \pm 1.6 \\ & & \\ \hline \textbf{55.11} \pm 1.6 \\ & & \\ \hline \textbf{55.01} \pm 1.6 \\ & & \\ \hline \textbf{55.03} \pm 1.6 $
 | $\begin{tabular}{ c c c c c } \hline Tex & & & & & & & & & & & & & & & & & & &$
 | Intrest %FPR0951 28.60 ±0.2 28.60 ±1.2 28.60 ±1.3 25.70 ±1.3 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.67 ±1.1 25.75 ±1.5 26.07 ±1.2 19.24 ±1.3 26.00 ±1.6 79.75 ±2.5 40.43 35.292 27.97 40.44 40.35 | 31.31 20.1 Colom %AUROC! 96.64 4.0.8 96.62 5.0.0 97.77 4.0.7 97.67 1.0.6 97.57 2.0.6 97.57 2.0.6 97.57 2.0.6 97.57 2.0.6 98.12 4.0.6 97.90 4.5.7 97.90 9.0.7 93.35 ±2.2 93.42 ±0.3 93.35 ±2.2 93.42 ±0.3 85.24 ±0.1 85.24 ±0.1 85.54 ±0.1 85.54 ±0.1 85.54 ±0.1 85.54 ±0.1 85.54 ±0.1 85.54 ±0.1 85.54 ±0.1 85.54 ±0.1 85.70 ±0.2
 | $\begin{array}{l} & 57.55\\ & 59.50\\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$
 | Colo %AUROC1 96.98 ±1.4 95.45 ±1.7 97.61 ±1.3 95.77 ±1.6 96.76 ±1.4 95.63 ±1.7 96.76 ±1.4 95.63 ±1.4 95.63 ±1.4 96.76 ±1.4 96.74 ±1.5 96.82 ±1.4 98.24 ±1.1 99.82 ±1.4 98.24 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.4 99.82 ±1.5 99.82 ±1.4 91.33 ±0.5 91.53 ±0.5 92.18 ±0.4 91.51 ±0.3 92.13 ±0.4 91.51 ±0.3 92.11 ±0.4 55.63 ±4.4 | $\begin{array}{c} 3004 \ 1005\\ 8607 \ 1005\ 1005\\ 8607 \ 1005\ 100$
 | $\begin{array}{r} \mathbf{N}, \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\$ | $\begin{array}{l} \begin{array}{l} 34.11\ \pm 0.05\\ \hline \\ \text{MFPR 0954}\\ \hline \\ \ \\ \ \\ \ \\ \ \\ \ \\ \ \\ \ \\ \ \\ \ $
 | $\begin{tabular}{ c c c c } \hline $Image $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$ | $\begin{array}{c} 99.0 (\pm 0.3 \\ \% \text{FPR 095L} \\ 7.78 \pm 1.2 \\ 55.00 \pm 1.7 \\ 55.00 \pm 1.7 \\ 55.00 \pm 1.7 \\ 55.00 \pm 1.7 \\ 55.03 \pm 1.6 \\ 53.07 \pm 1.2 \\ 53.08 \pm 1.2 \\ 53.08 \pm 1.2 \\ 52.09 \pm 2.0 \\ 87.74 \pm 1.1 \\ 10.05 \pm 1.2 \\ 52.09 \pm 2.0 \\ 87.74 \pm 1.1 \\ 10.05 \pm 1.2 \\ 52.09 \pm 2.0 \\ 87.74 \pm 1.1 \\ 10.05 \pm 1.2 \\ 10.05 \pm$ |
| Densender-121 M Mobile/NetV2 M ID %Error: 17:20 po ID ID %Error: 21:35 po

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 | $\begin{array}{c} {} {} {} {} {} {} {} {} {} {} {} {} {}$

 | DX
%FPR0951
55.11 ±1.0
55.11 ±1.0
55.10 ±1.4
55.649 ±22
55.69 ±2.0
58.64 ±2.1
57.85 ±3.1
57.85 ±3.1
97.30 ±0.4
97.30 ±0.4
97.436 ±2.1
97.14 ±0.6
DX
%FPR095.
22.44 ±2.7
52.42 ±2.2
52.42 ±2.4
52.44 ±2.7
52.44 ±2.7
52.44 ±2.7
52.44 ±2.7
52.44 ±2.7
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52.44 ±2.4
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52.44 ±2.4
53.44 ±2.4
51.85 ±2.9
51.85 ±2.951.9
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 | $\begin{array}{r} Tex \\ \% AUROC[\\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.05 \pm 0.4 \\ 94.26 \pm 0.2 \\ 94.05 \pm 0.4 \\ 94.05 \pm 0.2 \\ 92.05 \pm 0.05 \\ 94.56 \pm 0.05 \\ 94.05 \pm 0.05 \\ 95.02 \pm 0.4 \\ 95.04 \pm 0.4 $ | Intres %FPR0951 28.60 ±0.5 28.60 ±0.5 28.61 ±0.5 28.71 ±1.2 25.71 ±1.1 25.73 ±1.1 25.74 ±1.1 22.62 ±0.8 23.25 ±1.6 23.25 ±1.6 24.74 ±1.3 24.74 ±1.3 26.64 71 ±1.1 19.26 ±1.1 19.26 ±1.7 24.61 ±1.1 19.26 ±1.3 24.61 ±1.1 19.26 ±1.4 19.24 ±1.3 22.63 ±1.3 22.63 ±1.3 22.63 ±1.3 22.64 ±1.3 22.63 ±1.3 22.63 ±1.3 22.63 ±1.3 22.64 ±1.3 22.65 ±1.3 22.65 ±1.3 22.65 ±1.3 32.95 ±1.6 32.95 ±1.6 34.50 ±1.3 34.50 ±1.3 34.50 ±1.3 34.50 ±1.3 34.50 ±1.3 34.50 ±1.3 34.50 ±1.3 | 41.3 20.1 Colom %AUROC! %0.0 %0.25 %0.25 %0.25 %0.71 ±0.3 %0.52 ±0.3 %7.71 ±0.5 %0.61 ±0.8 %7.71 ±0.5 %0.95 ±0.8 %0.95 ±0.8 %0.95 ±0.8 %0.35 ±2.2 %0.35 ±2.2 %0.36 ±1.3 %0.36 ±1.3 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.36 ±1.2 %0.37 ±1.2 %0.36 ±1.2 %0.37 ±1.2 %0.36 ±1.2

 | $\begin{array}{c} 57.39\\ 59.50\\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$ | $\begin{array}{c} \textbf{Color}\\ \textbf{Color}\\$ | $\begin{array}{c} 30.03 \pm 20.11\\ & (%FPR 0.05, 1)\\ & (9.01 \pm 0.01)\\ $ | $\begin{array}{r} \mathbf{N}, \mathbf{N}\\ & \mathbf{N}, N$
 | $\begin{array}{c} 32.11 \\ 32.12 \\$ | $\begin{array}{c} 3.30\pm0.3\\ \textbf{K} (AUROC)\\ \textbf{K} (S,30)\pm0.3\\ \textbf{K} (3,30)\pm0.3\\ \textbf{K} (3,30)\pm0.3\\ \textbf{K} (3,30)\pm0.3\\ \textbf{K} (3,30)\pm0.3\\ \textbf{K} (3,30)\pm0.3\\ \textbf{K} (3,31)\pm0.3\\ \textbf{K} (3,3$ | $\begin{array}{c} 99.0, 7 \pm 0.3 \\ \hline 87 \text{FPR @95,l} \\ 57.0 \pm 1.2 \\ 56.0 \pm 1.2 \\ 57.0 \pm 1.2 \\ 57.0 \pm 1.2 \\ 59.0 \pm 1.2 \\ 5$ |
| Dense Net-121 M MobileNetV2 M

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 | $\begin{array}{c} {} {} {} {} {} {} {} {} {} {} {} {} {}$

 | DX
%FPRa951
55.11±1.0
55.10±1.0
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91. | $\begin{array}{l} & 1.2.2\\ \hline \text{WFPR0951}\\ & & & \\ & & \\ & & \\ & \\ & \\ & \\ & \\ &$
 | $\begin{array}{r} \hline \mathbf{Color}\\ \hline \mathbf{Color}\\ \hline \mathbf{Color}\\ \hline \mathbf{S}(4000C)^{+}\\ \hline \mathbf{S}(64\pm0.8)\\ \hline \mathbf{S}(7,7\pm0.7)\\ \hline \mathbf{S}(61\pm0.8)\\ \hline \mathbf{S}(7,7\pm0.7)\\ \hline \mathbf{S}(61\pm0.8)\\ \hline \mathbf{S}(7,7\pm0.7)\\ \hline \mathbf{S}(7,7\pm0.7)\\ \hline \mathbf{S}(7,9,0\pm0.8)\\ \hline \mathbf{S}(7,7\pm0.7)\\ \hline \mathbf{S}(7,9,0\pm0.8)\\ \hline \mathbf{S}(7,0\pm0.8)\\ \hline \mathbf{S}(7,0\pm0.$
 | $\begin{array}{l} & 5.55 \\ & 5.55 \\ \hline $0,55 \\ \hline $0,55 \\ \hline $0,55 \\ \hline $0,55 \\ \hline $0,15 \\ \hline$ | Coto Coto %AUROC1 96.98 ±14. 96.98 ±14. 97.61 ±13. 97.62 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 96.76 ±14. 98.20 ±11. 98.21 ±10. 98.22 ±1.1 98.24 ±1.1 99.25 ±0.6. 91.33 ±0.5. 91.33 ±0.5. 91.13 ±0.5. 91.13 ±0.5. 91.21 ±0.4 91.23 ±0.5. 91.23 ±0.5. 91.23 ±0.5. 91.24 ±0.5. 91.25 ±0.6 91.25 ±0.6 91.25 ±0.6 91.75 ±0.6 91.75 ±0.6 91.14 ±0.7 | $\begin{array}{c} 2000 \\ 2010 \\ \hline \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ &$ | $\begin{array}{r} \mathbf{w}_{30,33} = 1\\ & \mathbf{w}_{30,34} \\ & \mathbf{w}_{30,41} $
 | $\begin{array}{l} 52.11 \\ \begin{array}{l} 52.12 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $ | $\begin{array}{r} \hline \mathbf{Image} \\ & \mathbf{K} AUROC1 \\ & 83, 30 \pm 0.4 \\ & 83, 30 \pm 0.4 \\ & 83, 30 \pm 0.4 \\ & 83, 30 \pm 0.2 \\ & 83, 30 \pm 0.2 \\ & 83, 31 \pm 0.2 \\ & 83, 31 \pm 0.2 \\ & 83, 31 \pm 0.3 \\ & 84, 3$ | $\begin{array}{c} 99.07 \\ * 0.718 \pm 1.0 \\ \% FPR 0.95, \\$
 |
| Dense Net -121 M MobileNet V2 M <td>Method (MSF, z) (MSF, z) (MSF, z) (MSF,Res.) (JUR) (JUR)</td> <td>$\begin{array}{c} {} {} {} {} {} {} {} {} {} {} {} {} {}$</td> <td>DX
%FPR0951
55.10 ±1.0
55.10 ±1.4
55.10 ±1.4
55.64 ±2.2
55.69 ±2.0
55.84 ±2.1
57.85 ±3.1
55.84 ±2.1
57.85 ±3.1
55.84 ±2.1
97.30 ±0.3
67.98 ±2.0
85.73 ±1.1
97.14 ±0.6
DX
%FPR0955
52.41 ±2.7
52.44 ±2.7
51.84 ±2.3
53.84 ±2.35 ±3.44 ±3.35 ±3.44 ±3.55 ±3.44 ±3.55 ±3.44 ±3.55 ±3</td> <td>$\begin{array}{r} \text{Tex} \\ & & \text{(\$\$XUROC]\$} \\ & & \text{(\$\$XUROC]\$} \\ & \text{(\$\$4105 \pm ol.\$ 4\$)} \\ & & \text{(\$\$4105 \pm ol.\$ 4\$)} \\ & & \text{(\$\$4105 \pm ol.\$ 4\$)} \\ & & \text{(\$\$4105 \pm ol.\$ 5\$)} \\ & & \text{(\$\$323 \pm ol.\$ 4\$)} \\ & & \text{(\$\$333 \pm ol.\$ 4\$)} \\ & & \text{(\$\$5133 \pm ol.\$ 4\$)} \\ & &$</td> <td>$\begin{array}{l} & 1.22\\ \hline \text{WFPR0951}\\ & & & & & \\ & & & & \\ &$</td> <td><math display="block">\begin{array}{c} 1_{41,57} = \underline{3}_{55}\\ \hline \mathbf{Colom}\\ \mathbf{K}_{4UROC1}\\ 96_{64} = \underline{3}_{50}\\ 96_{65} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 96_{51} = \underline{3}_{50}\\ 98_{51} = \underline{3}_</math></td> <td>$\begin{array}{l} 57.55\\ 59$</td> <td>$\begin{array}{c} \textbf{Color}\\ \textbf{Color}\\ \textbf{Calue}\\ \textbf{Color}\\ \textbf{Color}\\$</td> <td>$\begin{array}{c} 2003, 2017\\ \hline \\ & (FPRa051, 0) \\$</td> <td>$\begin{array}{c} \mathbf{N}, \\ & & \\ &$</td> <td>$\begin{array}{l} \begin{array}{l} \begin{array}{l} \begin{array}{l} \begin{array}{l} \begin{array}{l} \begin{array}{l} \begin{array}{l}$</td> <td>Image Minage Marge % AUROC1 \$83.30 ± 0.3 \$83.30 ± 0.3 \$83.30 ± 0.3 \$83.30 ± 0.3 \$84.90 ± 0.4 \$83.56 ± 0.0 \$83.56 ± 0.2 \$83.90 ± 0.4 \$83.31 ± 0.3 \$83.31 ± 0.3 \$83.31 ± 0.3 \$83.31 ± 0.3 \$83.31 ± 0.3 \$83.71 ± 0.3 \$83.71 ± 0.3 \$83.71 ± 0.3 \$83.72 ± 0.6 \$87.44 ± 0.0 \$87.44 ± 0.0 \$81.42 ± 0.0 \$93.42 ± 0.7 \$93.65 ± 0.7 \$93.60 ± 0.7 \$94.16 ± 0.7 \$94.06 ± 0.7 \$94.06 ± 0.7 \$94.07 ± 0.02 \$93.60 ± 0.7 \$94.07 ± 0.12 ± 0.12 \$91.28 ± 1.2 \$93.60 ± 0.7 \$91.00 ± 0.7 \$94.07 ± 0.12 ± 0.12 \$91.28 ± 1.2</td> <td>$\begin{array}{c} 9000 \ \ 20.3 \\ \hline 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ 8000 \ \ \ \ \ \ \ \ \ \ \ \$</td> | Method (MSF, z) (MSF, z) (MSF, z) (MSF,Res.) (JUR)

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 | $\begin{array}{r} \text{Tex} \\ & & \text{($$XUROC]$} \\ & & \text{($$XUROC]$} \\ & \text{($$4105 \pm ol.$ 4$)} \\ & & \text{($$4105 \pm ol.$ 4$)} \\ & & \text{($$4105 \pm ol.$ 4$)} \\ & & \text{($$4105 \pm ol.$ 5$)} \\ & & \text{($$323 \pm ol.$ 4$)} \\ & & \text{($$333 \pm ol.$ 4$)} \\ & & \text{($$5133 \pm ol.$ 4$)} \\ & & $ | $\begin{array}{l} & 1.22\\ \hline \text{WFPR0951}\\ & & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & $ | $\begin{array}{c} 1_{41,57} = \underline{3}_{55}\\ \hline \mathbf{Colom}\\ \mathbf{K}_{4UROC1}\\ 96_{64} = \underline{3}_{50}\\ 96_{65} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 97_{75} = \underline{3}_{50}\\ 96_{51} = \underline{3}_{50}\\ 98_{51} = \underline{3}_$
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| Dems/Net-121 M MobileNetV2 M ID %Error: 17:30 pp ID %Error: 21:35 pp

 | $\label{eq:constraints} \begin{array}{ c c c c c } \hline Wethod \\ \hline & (MSF, [z , [)] \\ \hline & (MSF, Res.) \\ \hline & (DR, Res.) \\ \hline & (-\mathcal{H}, \ z\) \\ \hline & (-\mathcal{H}, \ z\) \\ \hline & (-\mathcal{H}, Res.) \\ \hline & (MSF, Res.) \\ \hline & (-\mathcal{H}, \ z\) \\ \hline & (-\mathcal{H}, Res.) \\ \hline & (-\mathcal{H}, Re$

 | $\begin{array}{c} & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & $
 | $\begin{array}{c} \hline \textbf{Dx}\\ & \% \text{FPR0951}\\ & \% \text{FPR0951}\\ & 55.11 \pm 10\\ & 55.10 \pm 10\\ & 55.10 \pm 12\\ & 55.61 \pm 10\\ & 55.64
\pm 12\\ & 57.85 \pm 31\\ & 57.85 \pm 31\\ & 57.85 \pm 31\\ & 57.85 \pm 31\\ & 67.03 \pm 12\\ & 97.30 \pm 03\\ & 67.98 \pm 20\\ & 97.30 \pm 03\\ & 67.98 \pm 20\\ & 97.30 \pm 03\\ & 67.98 \pm 20\\ & 97.30 \pm 03\\ & 77.35 \pm 11\\ & 77.35 \pm $
 | $\begin{array}{r} \hline \text{Tex} \\ & & & & \\ & & &
\\ & & & \\ & $ | $\begin{array}{l} & 1.2.2\\ \hline \text{WFPR}(0) \leq 1\\ & & & & & \\ $ | $\begin{array}{c} \hline \mathbf{Colom}\\ \hline \mathbf{Colom}\\ & & & & & & \\ \hline \mathbf{Colom}\\ & & & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$
 | $\begin{tabular}{ c c c c c } \hline Score of the second system of the secon$
 | $\begin{array}{c} \hline \textbf{Color}\\ \hline \textbf{K}_{4}UROC1\\ \hline \textbf{96}.08\pm1.4\\ \hline \textbf{96}.08\pm1.4\\ \hline \textbf{95}.45\pm1.7\\ \hline \textbf{96}.76\pm1.4\\ \hline \textbf{96}.76\pm1.4\\ \hline \textbf{96}.75\pm1.6\\ \hline \textbf{96}.04\pm1.5\\ \hline \textbf{96}.05\pm1.4\\ \hline \textbf{96}.05\pm1.4\\ \hline \textbf{98}.20\pm1.1\\ \hline \textbf{28}.41\pm8.1\\ \hline \textbf{98}.20\pm1.1\\ \hline \textbf{29}.43\pm1.6\\ \hline \textbf{98}.23\pm1.4\\ \hline \textbf{98}.23\pm1.4\\ \hline \textbf{99}.23\pm1.4\\ \hline \textbf{99}.23\pm1.4\\ \hline \textbf{99}.23\pm0.5\\ \hline \textbf{91}.23\pm0.5\\ \hline \textbf{91}.55.03\pm1.6\\ \hline \textbf{91}.55.03\pm1.6\\ \hline \textbf{91}.57\pm0.6\\ \hline \textbf{91}.14\pm0.7\\ \hline \textbf{72}.005\pm4.4\\ \hline \textbf{87}.10\pm1.1\\ \hline \textbf$ | $\begin{array}{c} 30.04 \\ 30.07 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $ | $\begin{array}{c} \mathbf{N}, \\ & \mathbf{K}_{4} \mathbf{U} \mathbf{U} \mathbf{C} \mathbf{C}, \\ & \mathbf{K}_{5} \mathbf{K}_{1} \mathbf{U} \mathbf{C} \mathbf{C}, \\ & \mathbf{K}_{5} \mathbf{K}_{1} \mathbf{C} \mathbf{C}, \\ & \mathbf{K}_{5} \mathbf{K}_{1} \mathbf{C}, \\ & \mathbf{K}_{5} \mathbf{K}_{1} \mathbf{C}, \\ & \mathbf{K}_{5} \mathbf{K}_{5} \mathbf{C}, \\ & \mathbf{K}_{5} \mathbf{K}_{5} \mathbf{K}_{5} \mathbf{C}, \\ & \mathbf{K}_{5} K$
 | $\begin{array}{l} 32.11 \\ 32.01 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $ | $\begin{tabular}{ c c c c c } \hline $Image $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$ | $\begin{array}{c} 90.07 \\ \pm 0.08 \\ \text{KPR 005L} \\ \hline 0.57 \\ \text{KPR 005L} \\ 55.02 \\ \pm 1.7 \\ 55.02 \\ \pm 1.7 \\ 55.02 \\ \pm 1.7 \\ 55.03 \\ \pm 1.6 \\ 52.49 \\ \pm 2.2 \\ 57.35 \\ \pm 1.6 \\ 52.49 \\ \pm 2.2 \\ 57.35 \\ \pm 1.6 \\ 52.49 \\ \pm 2.2 \\ 57.35 \\ \pm 1.6 \\ 52.49 \\ \pm 2.2 \\ 57.35 \\ \pm 1.5 \\ 57.35 \\ \pm 1.5 \\ 57.35 \\ \pm 1.5 \\ 52.09 \\ \pm 2.0 \\ \pm$ |
| Demas/Net-121 MobileNet'2 MobileNet'2 MobileNet'2 D %Error: 17:20 PP ID %Error: 21:35 PP PP

 | Method (MSF).[z .) (J) (MSF).[z .) (ASF).[z .) (ASF).[z .) (ASF).[z .) (MSF).[z .) (MSF).[z .) (MSF).[z .) (ASF).[z .] (BSF).[z .]

 | $\begin{array}{c} \text{TC}\\ \text{SAUBCOC}\\ \text{SAUBCOC}\\ \text{SAUBCOC}\\ \text{SBOJE}\\ \text{SAUDEC}\\ \text{SBOJE}\\ SBO$
 | $\begin{array}{c} \textbf{D} \textbf{\textit{K}} \\ & \% \textbf{FPR(0051)} \\ & \% \textbf{FPR(0051)} \\ & 55.10 \pm 1.0 \\ & 55.40 \pm 1.2 \\ & 56.49 \pm 2.0 \\ & 58.43 \pm 2.1 \\ & 58.43 \pm 2.1 \\ & 58.43 \pm 2.1 \\ & 98.43 \pm 2.0 \\ & 98.73 \pm 1.0 \\ & 1.1 \\ & 52.41 \pm 2.0 \\ & 51.80 \pm $

 | Texe %AUTROC? %A
 | $\begin{tabular}{ c c c c c } \hline Urres & & & & & & & & & & & & & & & & & & &$ | $\begin{array}{c} \hline \textbf{Colorman}\\ \hline \textbf{Colorman}\\ \textbf{MAURCC}\\ \textbf{MODE}\\ $
 | $\begin{array}{c} 3.33 \pm 4.8 \\ 8.57 \pm 0.003 \\ 8.57 \pm 0.003 \\ 1.033 \pm 4.8 \\ 1.033 \pm 4.8 \\ 1.033 \pm 4.8 \\ 1.033 \pm 4.8 \\ 1.04 \pm 0.033 \pm 4.6 \\ 1.04 \pm 0.033 \pm 4.0 \\ 1.04 \pm 0.033 \pm 1.04 \\ 1.04 \pm 0.04 \\ 1.04 \\ 1.04 \pm 0.04 \\ 1.04 \\ $ | $\begin{array}{c} \textbf{Color}\\ \hline \textbf{K} AUROC[\\ 96.08 \pm 1.4\\ 95.45 \pm 1.7\\ 96.78 \pm 1.4\\ 95.45 \pm 1.7\\ 97.78 \pm 1.1\\ 96.76 \pm 1.4\\ 96.78 \pm 1.4\\ 96.73 \pm 1.4\\ 96.74 \pm 1.4\\ 96.04 \pm 1.5\\ 96.04 \pm 1.4\\ 98.02 \pm 1.4\\ 98.02 \pm 1.4\\ 98.02 \pm 1.4\\ 99.04 \pm 1.4\\$ | $\begin{array}{c} 30.0, \\ 30.0, \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
 | No. %AUROCI 98.77 ±1.1 96.45 ±2.5 99.25 ±0.0 96.68 ±2.7 97.29 ±2.8 96.62 ±2.7 97.64 ±2.9 97.07 ±2.8 99.05 ±1.0 98.03 ±0.0 99.05 ±1.0 99.05 ±1.0 99.05 ±1.0 99.05 ±1.0 99.05 ±1.0 99.05 ±1.0 99.05 ±1.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.05 ±0.0 99.16 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 92.05 ±0.4 </th <th>$\begin{array}{l} \begin{array}{l} & \text{31.11}\\ \text{32.11}\\ \hline \\ & \text{33.11}\\ \hline \\ & \text{34.11}\\ \hline \\ & \text{35.11}\\ \hline \\ \\ & \text{35.11}\\ \hline \\ & \text{35.11}\\ \hline \\ \\ \\ & \text{35.11}\\ \hline \\ \\ \\ & \text{35.11}\\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$</th> <th>$\begin{array}{c} {\rm Image}\\ {\rm Supress}\\$</th> <th>$\begin{array}{c} 0000 \ \ 20.3\\ 80 \ \ \ \ \ \ \ \ \ \ \ \ \$</th> | $\begin{array}{l} \begin{array}{l} & \text{31.11}\\ \text{32.11}\\ \hline \\ & \text{33.11}\\ \hline \\ & \text{34.11}\\ \hline \\ & \text{35.11}\\ \hline \\ \\ & \text{35.11}\\ \hline \\ & \text{35.11}\\ \hline \\ \\ \\ & \text{35.11}\\ \hline \\ \\ \\ & \text{35.11}\\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$ | $\begin{array}{c} {\rm Image}\\ {\rm Supress}\\ $ | $\begin{array}{c} 0000 \ \ 20.3\\ 80 \ \ \ \ \ \ \ \ \ \ \ \ \ $
 |
| DemaNdet-121 M MobilieNetV2 M 1D %Error: 17.30 PO M ID %Error: 21.35 PO

 | Method (MSF, z). (MSF, z). (MSF,Res.). (MSF,Res.). (JUR)

 | SALTOCC 88.5.3 ± 0.3 88.5.4 ± 0.3 88.6.7 ± 0.0 88.6.7 ± 0.0 88.6.7 ± 0.0 88.6.7 ± 0.0 88.6.7 ± 0.0 88.6.7 ± 0.0 88.7 ± 0.0 88.7 ± 0.0 88.7 ± 0.0 88.7 ± 0.0 88.7 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.20 ± 0.0 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 90.00 ± 0.00 <t< th=""><th>DX %PEPR005.01 %PEPR005.01 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.50 ±1.0 5.56 ±2.0 5.51 ±1.0 5.56 ±2.0 5.54 ±2.0 9.41 5.63 7.14 ±0.6 5.71 ±1.0 5.54 ±2.0 ±1.0 ±1.0 5.54 ±2.0 ±1.0 ±1.0 5.54 ±1.0 ±1.0 ±1.0 5.54 ±1.0 ±1.0 ±1.0 5.54 ±1.0 ±1.2 ±1.2 5.54 ±1.0 ±1.5 ±1.0 5.54 ±1.5 ±1.5 ±1.5 5.54 ±1.5 ±1.5 ±1.5 5.54 ±1.5</th><th>Tee (*
%,UTB/CC) + 264
94.26 ± 0.04
94.26 ±</th><th>Stress %FPR0951 28.69 ±0.5 28.67 ±1.2 28.73 ±1.2 25.70 ±1.1 25.73 ±1.2 25.74 ±1.2 25.74 ±1.2 25.75 ±1.1 22.62 ±1.1 22.62 ±1.2 26.74 ±1.4 26.74 ±1.4 26.07 ±1.6 79.53 ±2.3 23.53 ±3.3 24.79 ±1.4 24.79.7 ±1.4 36.42 ±3.6.42 36.42 ±3.6.42 36.42 ±3.6.42 36.42 ±2.58 ±4.71 ±1.1 10 ±1.2 11.31 ±1.2</th><th>Number Color %AUROCC Sold # at a %0.2000 Sold # at a <tr< th=""><th>$\begin{array}{c} 0.025 \text{ general}\\ \mathbb{K}^{0}\text{FPR0605}\\$</th><th>Colo Colo %AUROCCY \$0.95 ± 1.4 ± 0.5 \pm 0.5 \pm</th><th>20.01 20.02 %FPR@951 %FPR@951 19.39 ±ss. 29.21 ±9.21 14.88 ±7.22 6.30 ±9.11 14.88 ±7.22 6.30 ±9.11 17.12 ±10.82 26.30 ±9.11 17.12 ±10.82 28.52 ±9.43 9.73 ±1.22 9.93 ±1.22 9.93.8 ±1.22 9.93.9 ±1.22 9.93.9 ±1.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.14.13 ±1.43 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.42 40.74 ±2.41</th><th>Name Name %AUROCC 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.6 80.2 97.0 92.0 90.0 80.6 82.7 70.7 92.0 90.0 <t< th=""><th>$\begin{array}{c} \begin{array}{c} & \text{7.1.1} \\ \text{3.1.2} \\ \text{3.1.2} \\ \text{5.1.2} \\ \text{5.1.2}$</th><th>Image %AUROCC %AUROCC</th><th>$\begin{array}{c} 9000 \ \ \text{whet-O} \\ & \text{%FPR095L} \\ 57.98 \pm 12 \\ 55.02 \pm 1.7 \\ 56.03 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.69 \pm 2.2 \\ 57.35 \pm 1.5 \\ 58.30 \pm 1.2 \\ 80.74 \pm 1.1 \\ 10.038 \pm 1.5 \\ 52.00 \pm 2.0 \\ 58.30 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.74 \pm 1.1 \\ 10.138 \pm 1.0 \\
10.138 \pm 1$</th></t<></th></tr<></th></t<> | DX %PEPR005.01 %PEPR005.01 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.51 ±1.0 5.50 ±1.0 5.56 ±2.0 5.51 ±1.0 5.56 ±2.0 5.54 ±2.0 9.41 5.63 7.14 ±0.6 5.71 ±1.0 5.54 ±2.0 ±1.0 ±1.0 5.54 ±2.0 ±1.0 ±1.0 5.54 ±1.0 ±1.0 ±1.0 5.54 ±1.0 ±1.0 ±1.0 5.54 ±1.0 ±1.2 ±1.2 5.54 ±1.0 ±1.5 ±1.0 5.54 ±1.5 ±1.5 ±1.5 5.54 ±1.5 ±1.5 ±1.5 5.54 ±1.5

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94.26 ± | Stress %FPR0951 28.69 ±0.5 28.67 ±1.2 28.73 ±1.2 25.70 ±1.1 25.73 ±1.2 25.74 ±1.2 25.74 ±1.2 25.75 ±1.1 22.62 ±1.1 22.62 ±1.2 26.74 ±1.4 26.74 ±1.4 26.07 ±1.6 79.53 ±2.3 23.53 ±3.3 24.79 ±1.4 24.79.7 ±1.4 36.42 ±3.6.42 36.42 ±3.6.42 36.42 ±3.6.42 36.42 ±2.58 ±4.71 ±1.1 10 ±1.2 11.31 ±1.2 | Number Color %AUROCC Sold # at a %0.2000 Sold # at a <tr< th=""><th>$\begin{array}{c} 0.025 \text{ general}\\ \mathbb{K}^{0}\text{FPR0605}\\$</th><th>Colo Colo %AUROCCY \$0.95 ± 1.4 ± 0.5 \pm 0.5 \pm</th><th>20.01 20.02 %FPR@951 %FPR@951 19.39 ±ss. 29.21 ±9.21 14.88 ±7.22 6.30 ±9.11 14.88 ±7.22 6.30 ±9.11 17.12 ±10.82 26.30 ±9.11 17.12 ±10.82 28.52 ±9.43 9.73 ±1.22 9.93 ±1.22 9.93.8 ±1.22 9.93.9 ±1.22 9.93.9 ±1.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.14.13 ±1.43 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.42 40.74 ±2.41</th><th>Name Name %AUROCC 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.6 80.2 97.0 92.0 90.0 80.6 82.7 70.7 92.0 90.0 <t< th=""><th>$\begin{array}{c} \begin{array}{c} & \text{7.1.1} \\ \text{3.1.2} \\ \text{3.1.2} \\ \text{5.1.2} \\ \text{5.1.2}$</th><th>Image %AUROCC %AUROCC</th><th>$\begin{array}{c} 9000 \ \ \text{whet-O} \\ & \text{%FPR095L} \\ 57.98 \pm 12 \\ 55.02 \pm 1.7 \\ 56.03 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.69 \pm 2.2 \\ 57.35 \pm 1.5 \\ 58.30 \pm 1.2 \\ 80.74 \pm 1.1 \\ 10.038 \pm 1.5 \\ 52.00 \pm 2.0 \\ 58.30 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.74 \pm 1.1 \\ 10.138 \pm 1.0 \\ 10.138 \pm 1$</th></t<></th></tr<> | $\begin{array}{c} 0.025 \text{ general}\\ \mathbb{K}^{0}\text{FPR0605}\\ $
 | Colo Colo %AUROCCY \$0.95 ± 1.4 ± 0.5 \pm | 20.01 20.02 %FPR@951 %FPR@951 19.39 ±ss. 29.21 ±9.21 14.88 ±7.22 6.30 ±9.11 14.88 ±7.22 6.30 ±9.11 17.12 ±10.82 26.30 ±9.11 17.12 ±10.82 28.52 ±9.43 9.73 ±1.22 9.93 ±1.22 9.93.8 ±1.22 9.93.9 ±1.22 9.93.9 ±1.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.91.5 ±2.22 9.14.13 ±1.43 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.41 31.43 ±1.42 40.74 ±2.41 | Name Name %AUROCC 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.5 400 902.6 80.2 97.0 92.0 90.0 80.6 82.7 70.7 92.0 90.0 <t< th=""><th>$\begin{array}{c} \begin{array}{c} & \text{7.1.1} \\ \text{3.1.2} \\ \text{3.1.2} \\ \text{5.1.2} \\ \text{5.1.2}$</th><th>Image %AUROCC %AUROCC</th><th>$\begin{array}{c} 9000 \ \ \text{whet-O} \\ & \text{%FPR095L} \\ 57.98 \pm 12 \\ 55.02 \pm 1.7 \\ 56.03 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35
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| Domeworke-121 MobileNetY2 M D000 D0000 D000 D000

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 | $\begin{array}{c} & \text{RLICC}\\ & \text{RS} 5.5 \pm 0.3 \\ & \text{RS} 0.5 \pm 0.5 \\ & \text{RS} 0.5 \\ & R$
 | DX %%PFP4005.12 %%PFP4005.25.11 ±1.0 55.11 ±1.0 55.11 ±1.0 55.11 ±1.0 55.11 ±1.0 55.11 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.03 ±1.0 55.04 ±1.0 71.3 ±3.0 71.3 ±3.0 71.4 ±0.7 71.4 ±0.7 71.4 ±0.7 71.4 ±0.7 71.4 ±0.7 71.4 ±0.7 71.4 ±0.7 71.4 ±0.4 42.2 ±1.7 71.4 ±0.4 42.2 ±1.7 71.4 ±0.4 42.4 ±0.7 10.4 ±0.4 <td>Tex (%,UTROC)
%,UTROC) = 0.4
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9</td> <td>$\begin{array}{c} \hline 1.12\\ \text{Intres}\\ \% FPR095[\\ 28.67\pm0.2\\ 8.75\ 11.2\\ 25.70\pm1.1\\ 25.70\pm1.1\\ 25.70\pm1.1\\ 25.70\pm1.1\\ 25.62\pm0.1\\ 25.26\pm1.1\\ 22.62\pm0.2\\ 25.26\pm1.1\\ 22.62\pm0.2\\ 20.72\pm0.2\\ 20.78\pm2.2\\ 20.78\pm$</td> <td>Number Number State State Number State State State State</td> <td>3.1.2 4.2.3 YEP16032 1.2.5 YEP16032 1.2.5 YEP16032 1.2.5 YEP16032 1.2.5 YEP16032 1.2.4 YEP16032 YEP16032 YEP16032 YEP16032</td> <td>Colo Colo %AUROCTA %0.98 ± 1.4 95.45 ± 1.4 95.45 ± 1.7 95.75 ± 1.6 95.37 ± 1.6 96.76 ± 1.4 96.78 ± 1.4 96.76 ± 1.4 96.37 ± 1.6 96.76 ± 1.4 96.37 ± 1.6 96.76 ± 1.4 96.37 ± 1.6 96.76 ± 1.4 90.23 ± 4.6 96.25 ± 1.4 90.23 ± 4.6 91.23 ± 4.6 91.23 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4</td> <td>$\begin{array}{c} 30.04 \\ \hline & \text{(\$FPR 095,1\$)} \\ \text{(\$FPR 095,1\$)} \\ 19.39 \pm ss. \\ 29.21 \pm 9.2 \\ 14.88 \pm 7.2 \\ 26.30 \pm 9.1 \\ 13.78 \pm 7.6 \\ 21.12 \pm 10.8 \\ 22.63 \pm 9.2 \\ 11.15 \pm 10.2 \\ 29.40 \pm 0.64 \\ 99.38 \pm 1.2 \\ 29.92 \pm 1.5 \\ 99.38 \pm 1.2 \\ 29.92 \pm 3.4 \\ 29.93 \pm 3.4 \\ 29.15 \pm 3.4 \\ 21.15 \pm 1.0$</td> <td><math display="block">\begin{array}{c} \mathbf{N}_{000} = 1_{000}\\ \mathbf{N}_{00} = \mathbf{N}_{00} \\ \mathbf{N}_{00} = \mathbf{N}_{0} \\ \mathbf{N}_{0} \\ \mathbf{N}_{0} = \mathbf{N}_{0} \\ \mathbf{N}_{0} \\</math></td> <td>$\begin{array}{l} \begin{array}{l} 32.11 \\ 32.12 \\ \hline \\ 33.12 \\ \hline$</td> <td>$\begin{array}{c} \mbox{Trans} \\ \mbox{Trans} \\$</td> <td>$\begin{array}{c} 9000 \\ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$</td> | Tex (%,UTROC)
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9 | $\begin{array}{c} \hline 1.12\\ \text{Intres}\\ \% FPR095[\\ 28.67\pm0.2\\ 8.75\ 11.2\\ 25.70\pm1.1\\ 25.70\pm1.1\\ 25.70\pm1.1\\ 25.70\pm1.1\\ 25.62\pm0.1\\ 25.26\pm1.1\\ 22.62\pm0.2\\ 25.26\pm1.1\\ 22.62\pm0.2\\ 20.72\pm0.2\\ 20.78\pm2.2\\ 20.78\pm$ | Number Number State State Number State State
 | 3.1.2 4.2.3 YEP16032 1.2.5 YEP16032 1.2.5 YEP16032 1.2.5 YEP16032 1.2.5 YEP16032 1.2.4 YEP16032 YEP16032
 | Colo Colo %AUROCTA %0.98 ± 1.4 95.45 ± 1.4 95.45 ± 1.7 95.75 ± 1.6 95.37 ± 1.6 96.76 ± 1.4 96.78 ± 1.4 96.76 ± 1.4 96.37 ± 1.6 96.76 ± 1.4 96.37 ± 1.6 96.76 ± 1.4 96.37 ± 1.6 96.76 ± 1.4 90.23 ± 4.6 96.25 ± 1.4 90.23 ± 4.6 91.23 ± 4.6 91.23 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4.6 91.13 ± 4.6 91.53 ± 4 | $\begin{array}{c} 30.04 \\ \hline & \text{($FPR 095,1$)} \\ \text{($FPR 095,1$)} \\ 19.39 \pm ss. \\ 29.21 \pm 9.2 \\ 14.88 \pm 7.2 \\ 26.30 \pm 9.1 \\ 13.78 \pm 7.6 \\ 21.12 \pm 10.8 \\ 22.63 \pm 9.2 \\ 11.15 \pm 10.2 \\ 29.40 \pm 0.64 \\ 99.38 \pm 1.2 \\ 29.92 \pm 1.5 \\ 99.38 \pm 1.2 \\ 29.92 \pm 3.4 \\ 29.93 \pm 3.4 \\ 29.15 \pm 3.4 \\ 21.15 \pm 1.0 $ | $\begin{array}{c} \mathbf{N}_{000} = 1_{000}\\ \mathbf{N}_{00} = \mathbf{N}_{00} \\ \mathbf{N}_{00} = \mathbf{N}_{0} \\ \mathbf{N}_{0} \\ \mathbf{N}_{0} = \mathbf{N}_{0} \\ \mathbf{N}_{0} \\$
 | $\begin{array}{l} \begin{array}{l} 32.11 \\ 32.12 \\ \hline \\ 33.12 \\ \hline $ | $\begin{array}{c} \mbox{Trans} \\ \mbox{Trans} \\$ | $\begin{array}{c} 9000 \\ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$ |
| With DeuseNet-121 M MobileNetV2 M ПD %Error: 17.20 ро ID %Error: 21.35 Ppo

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 | $\frac{\text{VALUCC}}{\text{88.55}\pm0.3}$ $\frac{\text{88.67}\pm0.3}{\text{88.67}\pm0.3}$
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 | $\begin{array}{c} 0000 \ \ 2000 \\ \hline \ \ 80\ \ \ \ \ \ \ \ \ \ \ \ \ \ \$ |
| Domes/Net-121 Mobile/tet/2 M PPOM ID %Error: 17.20 PPO PPO <td< th=""><td>$\begin{tabular}{ c$</td><td>$\begin{array}{c} \text{NALUCC}\\ \text{Set} & S$</td><td>DX %%PFPR0605.12 %%PFPR0605.12 \$</td><td>Texc %.017B/GC/14 %.017B/GC/14 %.0128/GC/14 %.0147</td><td>Intres %FPR095[%8.67 28.67 40.6 28.67 41.2 25.70 ±1.1 25.70 ±1.1 25.74 ±1.2 25.76 ±1.1 25.67 ±1.1 22.62 ±1.1 22.62 ±1.1 22.62 ±1.2 25.74 ±1.1 22.62 ±1.2 25.74 ±1.1 25.25 ±1.8 25.25 ±1.6 7.82 ±2.1 26.00 ±1.6 7.93.3 ±2.35 ±35.30 Decent 91.04 ±1.4 36.95 ±3.4 20.02 27.97 40.44 36.35 20.42 ±0.45 ±1.1 35.30 21.63 ±35.30 ±1.2 ±1.2 21.92 27.97 40.44 ±1.43 40.43 ±35.32 ±1.2 ±1.43 10.56 ±2.48 ±0.35 ±1.44 10.40 ±2.48 ±0.55 ±1.44</td><td>Number Number %AUROCC Soft at as a specific at a</td><td>$\begin{array}{c} 0.0000000\\ W(FP10003)\\ 12157 \pm 1.564 \pm 1.1\\ 17.89 \pm 2.8\\ 12.57 \pm 1.5.564 \pm 1.1\\ 17.89 \pm 2.8\\ 12.44 \pm 2$</td><td></td><td>$\begin{array}{c} 30.01 \\ \hline & \text{(FPR 005]} \\ \hline & \text{(FPR 005)}$</td><td>$\begin{array}{c} \mathbf{N}_{000} = \frac{1}{210}\\ \mathbf{N}_{01}\mathbf{R}_{007} = \frac{1}{10},\\ \mathbf{N}_{01}\mathbf{R}_{017} = \frac{1}{10},\\ \mathbf{N}_{017} = \frac{1}{10$</td><td>$\begin{array}{c} 32.11\\ 32.12\\ \hline \\ 32.12\\ \hline$</td><td>$\begin{array}{c} \mbox{Trans} \\ \mbox{Trans} \\$</td><td>$\begin{array}{c} 9000 & 42.3\\ 808 \text{ tot} - 0\\ \% \text{FPR 0954} \\ 57.98 \pm 12\\ 55.02 \pm 1.7\\ 56.633 \pm 1.6\\ 52.49 \pm 2.2\\ 57.35 \pm 1.6\\ 53.07 \pm 1.2\\ 59.05 \pm 1.3\\ 57.35 \pm 1.6\\ 53.05 \pm 1.3\\ 57.85 \pm 1.3\\ 57.85 \pm 1.3\\ 57.85 \pm 1.3\\ 57.85 \pm 1.3\\ 57.74 \pm 1.1\\ 1000 \text{ tot} 1.2\\ 77.74 \pm 1.1\\ 1000 \text{ tot} 1.2\\ 77.74 \pm 1.1\\ 75.78 \pm 1.3\\ 77.74 \pm 1.1\\ 75.774 \pm$</td></td<> | $\begin{tabular}{ c $
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 | $\begin{array}{c} {\rm Image} \\ {\rm Image} \\ {\rm MURCOC} \\ $ | $\begin{array}{c} 99.07, \pm 0.3\\ \text{%FPR095L}\\ 7.78\pm 1.2\\ 5.708\pm 1.2\\ 5.708\pm 1.2\\ 5.708\pm 1.2\\ 5.708\pm 1.2\\ 5.735\pm 1.6\\ 5.2,49\pm 2.2\\ 5.735\pm 1.6\\ 5.307\pm 1.2\\ 8.07\pm 1.2\\ 8$ |
| 11 DenseNot-121 MobileNatY2 M 20 Pp ID %Error: 17.30 Pp ID Pp M

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± 0.5 \pm | $\begin{array}{c} 30.01 \\ \hline & \text{FPR R095,} \\ \text{FPR R095,} \\ 19.39 \\ \pm ss. \\ 29.21 \\ \pm 9.2 \\ \pm 10.8 $ | No.00 Status %ALTROCT 11 90.55 200 90.65 25.2 90.65 25.2 90.65 25.2 90.65 26.2 90.72 22.2 90.65 26.2 90.72 22.2 90.65 26.7 90.65 26.7 90.65 26.7 90.66 26.7 90.67 41.6 90.67 41.6 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 22.8 90.71 24.8 90.71 24.8 90.71 24.8 90.71 24.8 90.71 24.8 90.71 24.8
 | $\begin{array}{c} 32.11 \\ 32.11 \\ 32.12 \\$ | $\begin{array}{c} \mbox{Trans} \\ \mbox{Trans} \\$ | $\begin{array}{c} 9000 & \pm 0.3\\ \text{%FPR095L}\\ 5.708 \pm 12 & 5.02 \pm 1.7\\ 5.5.02 \pm 1.7\\ 5.5.02 \pm 1.7\\ 5.5.02 \pm 1.7\\ 5.5.03 \pm 1.6\\ 5.2.49 \pm 2.2\\ 5.7.35 \pm 1.6\\ 5.3.05 \pm 1.3\\ 5.7.35 \pm 1.6\\ 5.3.05 \pm 1.3\\ 5.7.85 \pm 1.3\\ 5.7.85 \pm 1.3\\ 5.8.30 \pm 1.2\\ 80.74 \pm 1.3\\ 5.8.30 \pm 1.2\\ 80.74 \pm 1.3\\ 5.5.84 \pm 1.3\\ 5.5.88 \pm 1.9\\ 3.5.88 \pm 1.9\\ 3.1.95 \pm 2.0\\ 3.5.88 \pm 1.9\\ 3$ |
| -121 Mohievarya - 121 Mohievary2

 | Method (MSF)[z ,) (MSF) (MSF) DOCTOR (MSF) (MSSF) (MSF)

 | NURCIC 88.53 20.3 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.67 20.03 88.07 20.03 80.02 20.03 80.02 20.03 80.02 20.03 90.02 20.03 90.02 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 90.03 20.03 <td>DX WEPPR0551 11-0 %UPPR0551 \$1-0</td> <td>Texe %AUTROCY %AUTROCY \$\$ 5.75 ± 0.01 \$\$ 5.75 \pm 0.01 \$ 5.7</td> <td>$\begin{array}{l} \hline 1.12\\ \text{WFPR0951}\\ & & \\ & \\$</td> <td>Number Number MAUROCCH Color MAUROCCH Soft 4 # a 3 MOLTANCH Soft 4 # a 3 MOLTANCH</td> <td>$\begin{array}{c} 1.21, 2.02\\ 0.0000000000000000000000000000000$</td> <td>$\begin{array}{l} \hline \textbf{Color} & \textbf{Color} \\ \hline \textbf{MCIRCOC} \\ \hline \textbf{MAIRCOC} \\ \hline \textbf{MURCOC} \\ \hline \textbf{MURCOC}$</td> <td>$\begin{array}{c} 30.04 \\ 20.07 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$</td> <td>$\begin{tabular}{ c c c c c } \hline R(x) & R(x)$</td> <td>$\begin{array}{l} 37.11 \\ 39.11 \\$</td> <td>Image %ALTROCY %</td> <td>$\begin{array}{c} 9000, \ 2003\\ 8000, \ 8000, \ \ 8000, \ 8000, \ 8000, \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$</td>
 | DX WEPPR0551 11-0 %UPPR0551 \$1-0

 | Texe %AUTROCY %AUTROCY \$\$ 5.75 ± 0.01 \$\$ 5.75 \pm 0.01 \$ 5.7 | $\begin{array}{l} \hline 1.12\\ \text{WFPR0951}\\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$ | Number Number MAUROCCH Color MAUROCCH Soft 4 # a 3 MOLTANCH

 | $\begin{array}{c} 1.21, 2.02\\ 0.0000000000000000000000000000000$ | $\begin{array}{l} \hline \textbf{Color} & \textbf{Color} \\ \hline \textbf{MCIRCOC} \\ \hline \textbf{MAIRCOC} \\ \hline \textbf{MURCOC} \\ \hline \textbf{MURCOC}$ | $\begin{array}{c} 30.04 \\ 20.07 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $ | $\begin{tabular}{ c c c c c } \hline R(x) & R(x)$
 | $\begin{array}{l} 37.11 \\ 39.11 \\$ | Image %ALTROCY %
 | $\begin{array}{c} 9000, \ 2003\\ 8000, \ 8000, \ \ 8000, \ 8000, \ 8000, \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ 8000, \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$ |
| Wet-121 DumwNet-121 MobileNetV2 M on: 17.30 pp ID %Ence: 17.30 pp M

 | Method (MSF, z). (MSF, z). (MSF,Res.). (MSF,Res.). (MSF,Res.). (-74,IB). (MSP,Bes.). (-4,II). (-4,II). (-4,II). (-4,II). (-4,II). <

 | $\frac{N_{\rm AUCC}}{N_{\rm S}} (253\pm0.3)$ $\frac{N_{\rm S}}{N_{\rm S}} (253\pm0.3)$ $\frac{N_{\rm S}}{N} (253\pm0.3)$ $\frac{N_{\rm S}}{\mathsf$

 | DX %PPR005.01 %PPR005.01 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.01 ±1.0 55.08 ±1.0 55.48 ±2.0 \$5.03 ±1.0 55.48 ±2.0 \$5.03 ±1.0 67.05 \$5.03 ±1.0 \$7.73 ±1.0 77.14 ±0.0 \$7.71.4 ±0.0 \$7.71.4 50.41 ±2.7 ±1.1 ±2.0 ±2.0 \$7.71.4 50.41 ±2.7 ±1.0 ±5.7 ±1.1 ±2.0

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0.5 ± 0</td> <td>$\begin{array}{c} 30.04 \\ 30.07 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$</td> <td>No.001 No.002 %ALTROCT 11.0 %ALTROCT 10.0 96.05 82.2 40.0 96.06 82.7 71.0 96.07 81.0 80.0 97.29 82.8 90.0 96.06 82.7 70.0 96.07 90.05 80.0 96.07 90.05 80.0 96.08 82.7 49.0 96.05 80.0 90.05 96.06 82.2 82.7 96.05 80.00 90.05 96.07 14.0 90.05 96.07 15.0 90.05 96.07 15.0 90.05 96.07 16.0 90.05 96.07 16.0 90.05 96.08 90.05 90.05 96.09 90.05 90.05 96.07 16.0 90.05 96.08 90.07 11.0 96.09 90.07 90.07 <t< td=""><td>$\begin{array}{l} \begin{array}{l} & 1.1 \\ & 2.0 \\ \hline \\ & \\ & \\ & \\ \hline \\ & \\ & \\ \hline \\ & \\ &$</td><td>Image %AUROCIA %</td><td>$\begin{array}{c} 9000 & \pm 0.3\\ 80 \text{Ket-O} \\ \% \text{FPR 095L} \\ 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.03 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.69 \pm 2.2 \\ 57.35 \pm 1.6 \\ 58.30 \pm 1.2 \\ 57.83 \pm 1.3 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 55.84 \pm 1.2 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.78 \pm 1.0 \\ 58.75 \pm 1.1 \\ 55.55 \pm 1.1 \\ 58.75 \pm$</td></t<></td> | $\begin{array}{c} 0.12 \\ 0.$
 | Colo Colo %AUROC/ \$0.98 ± 1.4 ± 0.5 ± 0 | $\begin{array}{c} 30.04 \\ 30.07 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $ | No.001 No.002 %ALTROCT 11.0 %ALTROCT 10.0 96.05 82.2 40.0 96.06 82.7 71.0 96.07 81.0 80.0 97.29 82.8 90.0 96.06 82.7 70.0 96.07 90.05 80.0 96.07 90.05 80.0 96.08 82.7 49.0 96.05 80.0 90.05 96.06 82.2 82.7 96.05 80.00 90.05 96.07 14.0 90.05 96.07 15.0 90.05 96.07 15.0 90.05 96.07 16.0 90.05 96.07 16.0 90.05 96.08 90.05 90.05 96.09 90.05 90.05 96.07 16.0 90.05 96.08 90.07 11.0 96.09 90.07 90.07 <t< td=""><td>$\begin{array}{l} \begin{array}{l}
& 1.1 \\ & 2.0 \\ \hline \\ & \\ & \\ & \\ \hline \\ & \\ & \\ \hline \\ & \\ &$</td><td>Image %AUROCIA %</td><td>$\begin{array}{c} 9000 & \pm 0.3\\ 80 \text{Ket-O} \\ \% \text{FPR 095L} \\ 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.03 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.69 \pm 2.2 \\ 57.35 \pm 1.6 \\ 58.30 \pm 1.2 \\ 57.83 \pm 1.3 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 55.84 \pm 1.2 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.78 \pm 1.0 \\ 58.75 \pm 1.1 \\ 55.55 \pm 1.1 \\ 58.75 \pm$</td></t<> | $\begin{array}{l} \begin{array}{l} & 1.1 \\ & 2.0 \\ \hline \\ & \\ & \\ & \\ \hline \\ & \\ & \\ \hline \\ & \\ &$ | Image %AUROCIA % | $\begin{array}{c} 9000 & \pm 0.3\\ 80 \text{Ket-O} \\ \% \text{FPR 095L} \\ 57.98 \pm 1.2 \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.02 \pm 1.7 \\ 55.03 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.49 \pm 2.2 \\ 57.35 \pm 1.6 \\ 52.69 \pm 2.2 \\ 57.35 \pm 1.6 \\ 58.30 \pm 1.2 \\ 57.83 \pm 1.3 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 57.83 \pm 1.1 \\ 55.84 \pm 1.2 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.88 \pm 1.9 \\ 58.75 \pm 1.1 \\ 55.88
\pm 1.9 \\ 58.75 \pm 1.1 \\ 55.78 \pm 1.0 \\ 58.75 \pm 1.1 \\ 55.55 \pm 1.1 \\ 58.75 \pm$ |
| esNet-121 M DuussNet-121 M DuussNet-22 M DuussNet-22 M DuussNet-22 M D %Enve: 17.20 M D %Enve: 21.35 P M

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 | $\begin{array}{c} & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & $

 | DX %/PFP406551 110 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.10 ±1.0 55.01 ±1.0 55.41 ±2.1 55.08 ±1.0 55.48 ±2.1 55.08 ±1.0 55.48 ±2.1 97.11 ±3.0 ±5.53 ±2.1 97.12 ±2.41 ±2.1 ±2.1 97.12 ±2.41 ±2.3 ±2.0 97.12 ±2.42 ±2.7 ±2.0 ±2.0 97.11 ±3.23 ±3.09 ±2.5 ±3.14 ±3.3 98.70 ±0.41 ±4.0 ±1.0 ±1.0 ±1.0 ±1.0 97.12 ±4.24 ±7.7 ±2.42 ±7.7 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42 ±2.42

 | Texe %.017B/021 %.0180 91.26 91.26 91.26 91.26 91.26 91.26 91.26 91.26 91.26 91.26 91.26 91.26 91.27 91.26 91.27 91.26 91.27 91.26 91.27 91.28 91.29 91.20 91.21 91.22 91.23 91.24 91.24 | $\begin{tabular}{ c c c c c } \hline Urres & & & & & & & & & & & & & & & & & & &$
 | Number Number MAUROCCH Color MAUROCCH Soft d ± n 3 9625 ± 109 96.5 ± 108 9625 ± 109 96.6 ± 108 97.57 ± 405 96.6 ± 108 97.57 ± 405 96.6 ± 108 97.57 ± 405 96.6 ± 108 97.57 ± 405 96.1 ± 108 97.57 ± 405 96.1 ± 108 97.12 ± 46.6 ± 60.1 ± 108 86.1 ± 108 97.12 ± 46.6 ± 60.1 ± 108 86.2 ± 40.1 ± 108 87.42 ± 40.1 ± 108 84.8 ± 10.1 ± 108 87.42 ± 40.1 ± 108 85.2 ± 40.1 ± 108 87.42 ± 40.1 ± 108 85.7 ± 40.1 ± 108 96.21 ± 408 87.7 ± 40.1 ± 108 96.21 ± 408 85.7 ± 40.1 ± 108 96.21 ± 408 85.7 ± 40.1 ± 108 96.21 ± 408 84.3 ± 40.1 ± 108 96.21 ± 608 84.3 ± 40.1 ± 108 96.21 ± 608 84.3 ± 40.1 ± 108 96.21 ± 608 84.3 ± 40.1 ± 108 96.21 ± 608 84.3 ± 40.1 ± 108 96.21 ± 608 84.3 ± 40.1 ± 108 96.21 ± 608 84.3 ± 40.1 ± 108
 | 1/10 1/20 % PEP 0603/2 % 1/20 1/20 1/ | $\begin{array}{c} \mbox{Color} \\ \hline \mbox{Color} \\ \mbox{Support} \\ \$ | $\begin{array}{c} 30.04 \\ 30.07 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $
 | $\begin{array}{c} \mathbf{N}_{000} = 1_{00}\\ \mathbf{N}_{01}\mathbf{R}_{007} = 1_{11}\\ 9_{05} = 1_{05} 2_{00}\\ 9_{05} = 1_{00} 9_{05} 1_{00}\\ 9_{05} = 1_{00} 9_{00} 9_{00} 1_{11}\\ 9_{05} = 1_{00} 9_{00} 9_{00} 1_{11}\\ 9_{00} = 1_{00} 2_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} 1_{00} 1_{00} 1_{00} 1_{00} 1_{00} 1_{00}\\ 9_{00} = 1_{00} $
 | $\begin{array}{l} \begin{array}{l} 37.11 \\ 37.11 \\ 37.61 \\ 47.7 \\ 7.61 \\ 4.77 \\ 7.61 \\ 4.77 \\ 7.61 \\ 4.77 \\ 7.61 \\ 4.77 \\ 7.61 \\ 4.77 \\ 7.61 \\ 4.77 \\ 7.61 \\ 7$ | $\begin{array}{c} \mbox{Trans} \\ \mbox{Fig. 1} \\ Fi$ | $\begin{array}{c} 9000 \ \ $$20.3$\\ \hline $$Net-O $\\ \ \ \ \ \ \ \ \ \ \ \ \ \ $ |
| Distance 121 Densenter-121 Densenter-121 Densenter-121 Densenter-121 Densenter-121 Densenter-1230 De

 | Method (MSF, z). (MSF, z). (MSF,Res.). (MSF,Res.). (MSF,Res.). (JUS) (JR,Res.). (-7,Res.). (-7,Res.). (-7,Res.). (-7,Res.). (-7,Res.). (MSP,Res.). (-4,Res.). (MSP,Res.). (-4,Res.). <td>$\frac{N_{4}UROC}{N_{2}}$</td> <td>DX
%PPR0605.1
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.48 ±2.1
77.85 ±3.0
77.85 ±3.0
70.10 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.000</td> <td>$\begin{tabular}{ c c c c } \hline Tec (\$x_0UTBoC(\$C\$) \\ \$x_0UTBoC(\$t\$) \\ \$y_0L5\$ \$\pm 0.4\$ \\ \$y_0L5\$ \± 0.4</td> <td>$\begin{tabular}{ c c c c c } \hline Urres & \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$</td> <td>Number Number %AUROCC Solar %AUROCC Solar %AUROCC <</td> <td>$\begin{array}{c} 0.0000000\\ W(FPR00001)\\ 1.075 \pm 0.0000000000000000000000000000000000$</td> <td></td> <td>$\begin{array}{c} 30.01 \\ 30.01 \\ \hline \\ & \mbox{\$\$\em{ctal}\$} \\ \hline \\ & \mbox{\$\$\em{ctal}\$} \ \\ & \mbox{\$\$\em{ctal}\$} \ \\ & \mbox{\$\$\em{ctal}\$} \ \$</td> <td>No.11 No.11 %ALTROCT 11.1 %ALTROCT 11.1 96.05 22.5 90.05 22.5 90.06 22.5 90.06 24.7 91.02 24.0 90.05 24.0</td> <td>$\begin{array}{l} \begin{array}{l} & \text{31.11}\\ & \text{32.11}\\ \hline \\ & \text{33.11}\\ & \text{34.11}\\ &$</td> <td>Image %AUROCT %</td> <td>$\begin{array}{c} 0000 & \pm 0.3\\ 8 \\ \hline 8 \\ 8 \\ \hline 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$</td> | $\frac{N_{4}UROC}{N_{2}}$

 | DX
%PPR0605.1
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55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.10 ±1.0
55.48 ±2.1
77.85 ±3.0
77.85 ±3.0
70.10 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.00 ±3.000

 | $\begin{tabular}{ c c c c } \hline Tec ($x_0UTBoC($C$) \\ $x_0UTBoC($t$) \\ y_0L5 ± 0.4 | $\begin{tabular}{ c c c c c } \hline Urres & $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$
 | Number Number %AUROCC Solar %AUROCC Solar %AUROCC <
 | $\begin{array}{c} 0.0000000\\ W(FPR00001)\\ 1.075 \pm 0.0000000000000000000000000000000000$ |
 | $\begin{array}{c} 30.01 \\ 30.01 \\ \hline \\ & \mbox{$$\em{ctal}$} \\ \hline \\ & \mbox{$$\em{ctal}$} \ \\ & \mbox{$$\em{ctal}$} \ \\ & \mbox{$$\em{ctal}$} \ $$ | No.11 No.11 %ALTROCT 11.1 %ALTROCT 11.1 96.05 22.5 90.05 22.5 90.06 22.5 90.06 24.7 91.02 24.0 90.05 24.0
 | $\begin{array}{l} \begin{array}{l} & \text{31.11}\\ & \text{32.11}\\ \hline \\ & \text{33.11}\\ & \text{34.11}\\ & $ | Image %AUROCT % | $\begin{array}{c} 0000 & \pm 0.3\\ 8 \\ \hline 8 \\ 8 \\ \hline 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 $ |
| DenserVet-121 M Mobile/Vet/2 M ID %Ence: 17.30 M ID %Ence: 17.30 M M

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 | NAURCE CI SAUSCOV SAUSTON SBOJE SAUSTON SAUSTON SAUSTON SAUSTON SAUSTON SAUSTON SAUSTON SAUSTON SAUSTON SAUSTON

 | DX %PFPR0605.12 %PFPR0605.12 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$5:10 ± 1.0 \$7:10 ± 0.0 \$7:10 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:11 ± 0.0 \$7:12 ± 0.0 \$7:12 ± 0.0 \$7:14 ± 0.0 \$7:14 ± 0.0 \$7:14 ± 0.0 \$7:14 ± 0.0 \$7:14 ± 0.0 \$7:14 ± 0.0 \$7:15 ± 0.0 \$7:16 ± 0.0 <td>Tex (%,UTROC)
%,UTROC) = 0.04
91.26 ±0.24
91.26 ±0.24
91.26 ±0.24
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91.37 ±0.25 ±0.04
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M	Mahad	IDX		DD mean	Open	image-O	iNat	uralist	Tex	tures	Color	oscopy	Colo	rectal	N	oise	Imag	eNet-O
Model	Method	AUROCT FP	R0951 AURO	CT FPR095.	, AUROC	FPR095.	AUROUT	FPR095.	, AUROC	. FPR095†	AUROC	FPR@95‡	AUROCT	FPR0954	AUROC	. FPR0951	AUROC	⊺ FPR@95↓
	$(MSP, z _1)$	<u>86.17</u> <u>63</u> .	<u>37</u> 90.08	37.09	90.25	47.09	94.37	29.13	88.74	43.84	97.10	16.69	93.94	30.28	99.26	4.32	66.93	88.30
	(MSP,Res.)	<u>86.31</u> <u>62</u>	<u>35</u> 92.89	25.23	92.69	34.29	94.61	27.17	96.80	10.04	97.18	14.69	96.88	14.06	99.99	0.00	72.07	76.35
	$z (DR, z _1)$	85.36 66.	04 90.44	35.13	90.35	47.22	<u>94.75</u>	26.89	89.19	41.72	97.13	15.22	94.85	23.82	99.48	2.93	67.33	88.10
	(DR,Res.)	85.55 64.	66 <u>93.34</u>	22.76	93.25	31.27	94.99	24.30	97.15	8.06	97.36	12.46	<u>97.52</u>	10.10	99.99	0.00	73.12	73.10
ResNetV2-101 ID %Error: 22.63	$(-H, z _1)$	83.43 69.	62 90.98	36.74	90.46	51.57	94.53	33.11	89.06	47.03	98.37	9.66	95.71	23.18	99.48	3.80	69.25	88.80
	$(-\mathcal{H}, \text{Res.})$	83.50 68.	91 <u>93.67</u>	<u>25.61</u>	<u>92.78</u>	<u>40.20</u>	<u>94.63</u>	33.51	97.05	10.19	98.33	9.02	<u>98.12</u>	<u>8.62</u>	100.00	0.00	74.76	77.70
	MSP	86.35 61	93 89.16	41.81	90.13	47.48	93.70	32.96	87.04	51.90	97.47	14.92	91.55	44.28	97.37	12.53	66.87	88.60
	DOCTOR	85.67 64.	49 89.57	40.48	90.33	47.64	93.95	32.04	87.27	52.64	97.89	12.61	92.34	39.78	97.94	9.74	67.25	88.90
	-H	83.49 69.	09 90.25	41.32	90.23	54.09	93.80	38.97	87.47	54.92	<u>98.52</u>	8.69	94.02	34.70	98.46	7.73	69.24	90.10
	$ z _{1}$	47.74 95.	45 70.81	66.69	53.48	87.82	73.95	78.05	73.89	66.14	58.42	89.18	86.16	51.18	99.61	1.36	50.14	93.10
	Residual	50.18 94.	86 85.59	50.02	80.17	68.38	76.76	80.65	<u>97.67</u>	10.99	67.60	98.55	95.43	25.34	99.95	0.00	81.57	66.20
	Max Logit	77.25 71.	07 90.24	41.72	88.11	59.64	91.87	48.90	87.08	55.70	<u>99.04</u>	4.64	96.25	25.98	98.79	6.47	70.57	90.70
	Energy	74.68 77.	15 89.41	45.23	85.86	68.88	89.27	59.78	85.85	61.61	99.19	3.17	96.56	23.82	98.83	6.83	70.33	92.55
	Gradnorm	64.64 88.	00 84.85	46.15	73.53	76.05	87.99	53.65	85.04	50.85	94.56	29.39	95.94	22.56	99.82	0.67	57.05	89.85
	VIM	70.30 86.	87 94.95	25.61	92.08	41.79	91.68	47.40	99.17	3.39	95.59	29.88	99.30	1.26	100.00	0.00	86.80	55.55
	Manai	30.82 93.	95 89.62	40.82	80.45	61.59	85.09	73.14	98.19	9.19	11.30	98.76	96.09	22.40	99.00	0.00	04.20	62.85
Madal	M. 41 - 3	IDX	OC	DD mean	Openi	image-O	iNat	uralist	Tex	tures	Color	ioscopy	Colo	rectal	N	oise	Imag	eNet-O
Model	Method	ID# AUROC† FF	OC R@95↓ AURC	DD mean C† FPR®95,	Openi AUROC	i mage-O † FPR©95↓	iNat AUROC†	uralist FPR@95.	Tex AUROC	tures FPR@95↓	Color AUROC	toscopy † FPR@95↓	Colo AUROC†	rectal FPR@95↓	N AUROC	oise ∙ FPR@95↓	Imag AUROC	geNet-O ↑ FPR@95↓
Model	Method (MSP, $ z _1$)	IDX AUROC† FF 85.99 63.	00 R@95↓ AURC 14 89.52	DD mean C↑ FPR@95, 33.01	Openi AUROC [*] 90.93	image-O ↑ FPR@95↓ 39.50	iNat AUROC↑ 95.36	uralist FPR@95. 21.61	Tex AUROC 89.65	tures FPR@95↓ 37.34	Color AUROC 96.79	ioscopy ↑ FPR@95↓ 17.15	Colo AUROC† 96.06	rectal FPR@95↓ 20.94	N AUROC 99.74	oise ∙ FPR@95↓ 1.10	Imag AUROC 58.10	geNet-O ↑ FPR@95↓ 93.45
Model	Method (MSP, z 1) (MSP,Res.)	IDX AUROC† FP 85.99 63 85.97 63	00 R@95↓ AURC 14 89.52 33 90.05	DD mean C† FPR@95, 33.01 31.62	Openi AUROC 90.93 91.17	image-O ↑ FPR@95. 39.50 38.58	iNat AUROC↑ 95.36 94.08	uralist FPR@95, 21.61 27.50	Tex AUROC 89.65 93.38	tures FPR:095↓ 37.34 22.93	Color AUROC 96.79 96.18	noscopy ↑ FPR@95↓ 17.15 19.71	Colo AUROC↑ 96.06 95.51	rectal FPR@95. 20.94 23.60	N AUROC 99.74 99.67	oise · FPR:095↓ 1.10 0.60	Imag AUROC 58.10 60.35	eNet-O ↑ FPR@95↓ 93.45 88.45
Model	Method (MSP, z 1) (MSP,Res.) (DR, z 1)	IDX AUROC† FP 85.99 63 85.97 63 85.77 64	OC R@95↓ AURC 14 89.52 33 90.05 51 90.00	DD mean C↑ FPR@95, 33.01 31.62 30.09	Openi AUROC 90.93 91.17 91.55	image-O ↑ FPR@95↓ 39.50 38.58 36.00	iNat AUROC1 95.36 94.08 <u>95.98</u>	uralist FPR@95, 21.61 27.50 <u>17.81</u> 24.22	Tex AUROC 89.65 93.38 90.32	tures FPR@95↓ 37.34 22.93 33.12 19.12	Color AUROC 96.79 96.18 97.10	hoscopy ↑ FPR@95↓ 17.15 19.71 14.22 1.0 m	Colo AUROC↑ 96.06 95.51 96.88	rectal FPR@95↓ 20.94 23.60 15.68	N AUROC 99.74 99.67 99.79	oise · FPR@95↓ 1.10 0.60 0.83 0.51	Imag AUROC 58.10 60.35 58.36	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 97.07
Model	Method (MSP, z 1) (MSP,Res.) (DR, z 1) (DR,Res.)	ID≭ AUROC↑ FP 85.99 63 85.97 63 85.77 64 85.72 65 01.00 65	OC R@95↓ AURC 14 89.52 33 90.05 51 90.00 09 90.43 14 89.52	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.80</u>	Openi AUROC 90.93 91.17 91.55 91.72	image-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> 36.00	iNat AUROC† 95.36 94.08 <u>95.98</u> 94.50	21.61 27.50 24.33 24.33	Tex AUROC 93.38 90.32 93.85 24.07	tures FPR.095↓ 37.34 22.93 33.12 <u>19.42</u> <u>22.95</u>	Color AUROC 96.79 96.18 97.10 96.30 96.30	17.15 19.71 14.22 16.79	Colo AUROC↑ 96.06 95.51 96.88 96.21	rectal FPR@95. 20.94 23.60 15.68 17.90	N AUROC 99.74 99.67 99.79 99.62 99.62	oise · FPR®95↓ 1.10 0.60 0.83 0.54 0.64	Imag AUROC 58.10 60.35 58.36 60.83 60.83	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 87.35
Model		IDx AUROC† FF 85.99 63. 85.97 63. 85.77 64. 85.72 65. 84.90 67.	00 R@95↓ AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 20 0.84	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> <u>28.44</u>	Openi AUROC 90.93 91.17 91.55 91.72 92.41 92.41	image-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.47	iNat AUROC 95.36 94.08 95.98 94.50 96.52 96.52	21.61 27.50 17.81 24.33 16.28	Tex AUROC 93.38 90.32 9 <u>3.85</u> 91.05	tures FPR:095↓ 37.34 22.93 33.12 <u>19.42</u> 32.85 10.07	Color AUROC 96.79 96.18 97.10 96.30 97.89 97.89	17.15 19.71 14.22 16.79 9.86 14.27	Colo AUROC↑ 96.06 95.51 96.88 96.21 97.79 97.79	rectal FPR@95.J 20.94 23.60 15.68 17.90 12.36	N 99.74 99.67 99.79 99.62 99.83 99.83	oise FPR®95↓ 1.10 0.60 0.83 0.54 0.68 0.68	Imag AUROC 58.10 60.35 58.36 60.83 60.31 0.31	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 97.60
Model	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, \boldsymbol{z} _1) \\ (MSP, Res.) \\ (DR, \boldsymbol{z} _1) \\ (DR, Res.) \\ (-\mathcal{H}, \boldsymbol{z} _1) \\ (-\mathcal{H}, Res.) \end{array}$	ID× AUROC↑ FF 85.99 63. 85.77 64. 85.72 65. 84.90 67. 84.85 67.	OC R:095↓ AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 87 91.46	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46	Openi AUROC 90.93 91.17 91.55 91.72 <u>92.41</u> 92.64	image-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09	iNat AUROC 95.36 94.08 95.98 94.50 96.52 95.67	rralist FPR@95, 21.61 27.50 <u>17.81</u> 24.33 16.28 20.33	Tex AUROC1 89.65 93.38 90.32 <u>93.85</u> 91.05 <u>94.42</u>	tures FPR.095↓ 37.34 22.93 33.12 <u>19.42</u> 32.85 <u>19.07</u>	Color AUROC 96.79 96.18 97.10 96.30 <u>97.89</u> 97.45	17.15 19.71 14.22 16.79 <u>9.86</u> 11.37	Colo AUROC↑ 96.06 95.51 96.28 96.21 <u>97.79</u> 97.56	rectal FPR:095↓ 20.94 23.60 15.68 17.90 12.36 12.30	N 99.74 99.67 99.79 99.62 99.83 99.79	FPR.@95↓ 1.10 0.60 0.83 0.54 0.68 0.39	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71	PR095↓ † FPR095↓ 93.45 88.45 93.00 87.35 92.60 87.70
at-121 c: 25.58	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline MSP \end{array}$	ID× AUROC↑ FP 85.99 63. 85.97 63. 85.77 64. 85.72 65. 84.90 67. 86.11 62	Od R:095↓ AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 87 91.46 667 88.81	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77	Openi AUROC 90.93 91.17 91.55 91.72 <u>92.41</u> 92.64 90.26	image-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08	iNat AUROC 95.36 94.08 95.98 94.50 96.52 95.67 94.26	rralist FPR@95, 21.61 27.50 <u>17.81</u> 24.33 16.28 20.33 27.56	Tex 89.65 93.38 90.32 <u>93.85</u> 91.05 <u>94.42</u> 88.31	tures FPR@95↓ 37.34 22.93 33.12 <u>19.42</u> <u>32.85</u> <u>19.07</u> 43.72	Color AUROC 96.79 96.18 97.10 96.30 <u>97.89</u> 97.45 96.90	hoscopy ↑ FPR@95↓ 17.15 19.71 14.22 16.79 <u>9.86</u> 11.37 17.10	Colo AUROC↑ 96.06 95.51 96.88 96.21 <u>97.79</u> 97.56 94.44	rectal FPR@95↓ 20.94 23.60 15.68 17.90 12.36 12.30 30.72	N 99.74 99.67 99.79 99.62 99.83 99.79 99.55	oise FPR@95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97	eeNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55
Net-121 Tror: 25.58	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline MSP \\ DOCTOR \end{array}$	ID⊁ AUROC↑ FP 85.99 63. 85.77 64. 85.72 65. 84.90 67. 84.85 67. 86.11 62. 85.93 63.	Od R@95↓ AURO 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 87 91.46 667 88.81 43 89.28	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17	Openi 90.93 91.17 91.55 91.72 92.41 92.64 90.26 90.82	image-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08 39.93	iNat AUROC 95.36 94.08 94.50 96.52 95.67 94.26 94.83	rralist FPR@95, 21.61 27.50 <u>17.81</u> 24.33 16.28 20.33 27.56 23.95	Tex 89.65 93.38 90.32 <u>93.85</u> 91.05 <u>94.42</u> 88.31 88.85	tures FPR@95↓ 37.34 22.93 33.12 <u>19.42</u> 32.85 <u>19.07</u> 43.72 41.01	Color AUROC 96.79 96.18 97.10 96.30 97.89 97.45 96.90 97.33	hoscopy ↑ FPR@95↓ 17.15 19.71 14.22 16.79 9.86 11.37 17.10 13.52	Colo AUROC↑ 96.06 95.51 96.88 96.21 97.79 97.56 94.44 95.24	rectal FPR@95↓ 20.94 23.60 15.68 17.90 12.36 12.30 30.72 25.94	N 99.74 99.67 99.79 99.62 99.83 99.79 99.55 99.64	bise FPR@95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 93.45
%Error: 25.58	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	IDx AUROC† FF 85.99 63. 85.97 63. 85.77 64. 85.72 65. 84.90 67. 86.11 62 85.93 63. 84.95 66.	OC R@951 AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 887 91.46 667 88.81 43 89.28 76 90.39	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.84</u> 26.46 36.77 34.17 30.68	Openi 90.93 91.17 91.55 91.72 92.41 92.64 90.26 90.82 91.91	image-O FPR@95↓ 39.50 38.58 36.00 35.28 34.47 34.09 43.08 39.93 37.18	iNat AUROC 95.36 94.08 95.98 94.50 96.52 95.67 94.26 94.83 95.83	rralist FPR@95, 21.61 27.50 17.81 24.33 16.28 20.33 27.56 23.95 19.56	Tex 89.65 93.38 90.32 <u>93.85</u> 91.05 <u>94.42</u> 88.31 88.85 90.08	tures FPR@95↓ 37.34 22.93 33.12 <u>19.42</u> 32.85 <u>19.07</u> 43.72 41.01 37.56	Color AUROC 96.79 96.18 97.10 96.30 97.45 96.90 97.33 97.95	17.15 19.71 14.22 16.79 <u>9.86</u> 11.37 17.10 13.52 <u>9.42</u>	Colo AUROC↑ 96.06 95.51 96.88 96.21 <u>97.79</u> 97.56 94.44 95.24 97.00	rectal FPR@95↓ 20.94 23.60 15.68 17.90 12.36 <u>12.30</u> 30.72 25.94 17.20	N AUROC 99.74 99.67 99.79 99.62 99.83 99.79 99.55 99.64 99.76	bise · FPR@95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 93.45 93.45 92.70
D %Error: 25.58	$\begin{array}{c} \hline {\bf Method} \\ (MSP, z _1) \\ (MSP, Res.) \\ (DR, Res.) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline {\bf MSP} \\ {\bf DOCTOR} \\ -\mathcal{H} \\ z _1 \\ \hline \end{array}$	IDX AUROC† FP 85.99 63. 85.77 64. 85.77 65. 84.90 67. 84.85 67. 86.91 62. 85.93 63. 84.90 67. 84.95 67. 85.93 63. 44.97 66. 47.53 94.	OC R@951 AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 87 91.46 67 88.81 43 89.28 96 90.39 93 78.50	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17 30.68 53.82	Openi AUROC 90.93 91.17 91.55 91.72 <u>92.41</u> 92.64 90.26 90.82 91.91 69.94	mage-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08 37.18 70.15	iNat AUROC 94.08 94.08 95.98 94.50 96.52 95.67 94.26 94.83 95.83 89.06	rralist FPR@95, 21.61 27.50 17.81 24.33 16.28 20.33 27.56 23.95 19.56 39.14	Tex 89.65 93.38 90.32 93.85 91.05 94.42 88.31 88.85 90.08 84.61	tures FPR@95↓ 37.34 22.93 33.12 <u>19.42</u> 32.85 <u>19.07</u> 43.72 41.01 37.56 49.73	Color AUROC 96.79 96.18 97.10 96.30 <u>97.89</u> 97.45 96.90 97.33 <u>97.95</u> 58.85	17.15 19.71 14.22 16.79 <u>9.86</u> 11.37 17.10 13.52 <u>9.42</u> 89.84	Colo AUROC↑ 96.06 95.51 96.88 96.21 <u>97.79</u> 97.56 94.44 95.24 97.00 92.89	rectal FPR@95↓ 20.94 23.60 15.68 17.90 12.36 12.30 30.72 25.94 17.20 34.90	N 99.74 99.67 99.79 99.62 99.83 99.79 99.55 99.64 99.76 99.88	bise FPR®95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15 0.49	Imag 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17 54.29	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 93.45 92.70 92.50
DenselNet-121 ID %Error: 25.58 PpoM	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline \textbf{MSP} \\ \textbf{DOCTOR} \\ -\mathcal{H} \\ z _1 \\ \textbf{Residual} \\ \end{array}$	IDX AUROC† FF 85.99 63. 85.77 64. 85.72 65. 84.90 67. 84.85 67. 86.11 62 85.93 63. 84.97 66. 47.53 94. 51.52 94.	OC R@951 AURC 14 89.52 33 90.05 51 90.00 99.43 31 90.83 91.46 667 88.81 43 89.28 76 90.39 93 78.50 26 71.96	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17 30.68 53.82 66.47	Openi AUROC 90.93 91.17 91.55 91.72 92.41 92.64 90.26 90.82 91.91 69.94 69.78	mage-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08 39.93 37.18 70.15 78.27	iNat AUROC 95.36 94.08 95.98 94.50 96.52 95.67 94.26 94.83 95.83 89.06 61.14	rralist FPR@95. 21.61 27.50 <u>17.81</u> 24.33 16.28 20.33 27.56 23.95 <u>19.56</u> 39.14 93.61	Tex 89.65 93.38 90.32 <u>93.85</u> 91.05 <u>94.42</u> 88.31 88.85 90.08 84.61 90.21	tures FPR@95↓ 37.34 22.93 33.12 <u>19.42</u> 32.85 <u>19.07</u> 43.72 41.01 37.56 49.73 33.64	Color AUROC 96.79 96.18 97.10 96.30 97.89 97.45 96.90 97.33 97.95 58.85 37.94	17.15 19.71 14.22 16.79 <u>9.86</u> 11.37 17.10 13.52 <u>9.42</u> 89.84 99.37	Colo AUROC↑ 96.06 95.51 96.88 96.21 97.79 97.56 94.44 95.24 97.00 92.89 75.49	rectal FPR@95↓ 20.94 23.60 15.68 17.90 12.36 12.30 30.72 25.94 17.20 34.90 70.74	N AUROC 99.74 99.67 99.79 99.62 99.82 99.79 99.55 99.64 99.76 99.88 97.32	bise → FPR@95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15 0.49 14.40	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17 54.29 71.83	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 93.45 93.50 93.55 92.60 87.70 93.55 92.50 75.25
DenseNet-121 ID %Error: 25.58		IDx AUROC† FF 85.99 63. 85.97 63. 85.77 64. 85.72 65. 84.90 67. 84.85 67. 86.11 62 86.13 66. 47.53 94. 77.97 71. 79.90 71.	OC R:0951 AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 87 91.46 43 89.28 76 90.39 93 78.50 26 71.96 35 91.62	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17 30.68 53.82 66.47 28.87 28.87	Openi 4 AUROC 90.93 91.17 91.55 91.72 92.41 92.64 90.82 90.82 91.91 69.94 69.78 92.19 92.55 91.72 92.64 90.93 90.93 91.72 92.64 90.93 90.93 91.72 92.64 90.93 90.93 91.72 92.64 90.93 90.93 91.72 90.93 90.93 91.72 90.93 90.93 91.72 90.94 90.93 90.93 91.72 90.94 90.94 90.95	image-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08 39.93 37.18 70.15 78.27 38.48 49.01	iNat/ AUROC1 95.36 94.08 95.98 94.50 96.52 95.67 94.26 94.83 95.83 88.06 61.14 96.07	rralist FPR:095,1 21.61 27.50 17.81 24.33 16.28 20.33 27.56 23.95 19.56 39.14 93.61 20.57	Tex 89.65 93.38 90.32 <u>93.85</u> 91.05 <u>94.42</u> 88.31 88.85 90.08 84.61 90.21 91.59	tures FPR:095↓ 37.34 22.93 33.12 19.42 32.85 19.07 43.72 41.01 37.56 49.73 33.64 34.32 07.10	Color AUROC 96.79 96.18 97.10 96.30 97.45 96.90 97.45 96.90 97.33 97.95 58.85 37.94 98.20	17.15 19.71 14.22 16.79 <u>9.86</u> 11.37 17.10 13.52 <u>9.42</u> 89.84 99.37 8.77 8.77	Colo AUROC† 96.06 95.51 96.88 96.21 97.79 97.56 94.44 95.24 97.00 92.89 75.49 <u>98.62</u>	rectal FPR0954 20.94 23.60 15.68 17.90 12.36 12.30 30.72 25.94 17.20 34.90 70.74 <u>6.48</u> 25.94	N AUROC 99.74 99.67 99.79 99.62 99.82 99.79 99.55 99.64 99.76 99.88 97.32 99.88 97.32	bise - FPR®95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15 0.49 14.40 0.49 0.49	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17 54.29 71.83 64.77	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 93.45 92.50 75.25 92.50 75.25 92.95 92.50
DensoNet-121 ID %Error: 25.58	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _1) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline \textbf{MSP} \\ \textbf{DOCTOR} \\ -\mathcal{H} \\ z _1 \\ \textbf{Residual} \\ \textbf{Max Logit} \\ \textbf{Energy} \\ \hline \end{array}$	IDx AUROC† FP 85.99 63. 85.97 64. 85.77 64. 85.72 65. 84.90 67. 84.85 67. 86.11 62 84.97 66. 47.53 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.52 94. 51.54 94. 51.55 94. 54.91 55.91 55.91 56.91	OC R@951 AURC 14 89.52 33 90.05 51 90.00 09 90.43 31 90.83 87 91.46 667 88.81 43 89.28 76 90.37 99.3 78.50 26 71.96 35 91.62 77 91.47	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17 30.68 53.82 66.47 28.87 30.02 30.	Openi AUROC ² 90.93 91.17 91.55 91.72 92.41 92.64 90.82 91.91 69.94 69.78 92.19 91.54 70.75 91.54	mage-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08 39.93 37.18 70.15 78.27 38.48 42.66	iNat/ AUROC1 95.36 94.08 95.98 94.50 96.52 95.67 94.26 94.83 95.83 89.06 61.14 95.60 95.00 95.00	rralist FPR.095, 21.61 27.50 17.81 24.33 16.28 20.33 27.56 23.95 19.56 23.95 19.56 20.57 23.50 20.57 23.50	Tex 89.65 93.38 90.32 93.85 91.05 94.42 88.31 88.85 90.08 84.61 90.21 91.59 91.39 90.91 90.21 91.59 91.39	tures FPR@95, 37.34 22.93 33.12 <u>19.42</u> 32.85 <u>19.07</u> 43.72 41.01 37.56 49.73 33.64 34.32 35.43	Color AUROC 96.79 96.18 97.10 96.30 97.45 96.90 97.45 96.90 97.33 97.95 58.85 37.94 98.20 97.87	Doscopy ↑ FPR@95↓ 17.15 19.71 14.22 16.79 9.86 11.37 17.10 13.52 9.92 89.84 99.937 8.77 11.18	Colo AUROC [↑] 96.06 95.51 96.82 96.21 97.79 97.56 94.44 95.24 97.00 92.89 97.59 98.62 98.62 98.62 98.86	rectal FPR@954 20.94 23.60 15.68 17.90 12.36 12.30 30.72 25.94 17.20 34.90 70.74 <u>6.48</u> 5.02	N AUROC 99.74 99.67 99.62 99.83 99.79 99.55 99.64 99.76 99.88 99.79 99.89 99.32 99.89 99.32	Dise FPR@95,1 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15 0.49 1.40 0.49 0.49 0.39	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17 54.29 71.83 64.77 65.12	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 92.70 93.45 92.70 92.50 75.25 92.95 91.95 91.95
DenseNet-121 ID %Error: 25.58	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, z _2) \\ (DR, Res.) \\ (-\mathcal{H}, z _1) \\ (-\mathcal{H}, Res.) \\ \hline (-\mathcal{H}, Res.) \\ \hline MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \\ Max Logit \\ Energy \\ Gradnorm \\ VM \end{array}$	IDX AUROC† FP 85.99 63. 85.97 64. 85.77 64. 85.77 64. 85.97 63. 84.90 67. 84.85 67. 84.85 67. 84.97 66. 47.53 94. 51.52 94. 77.97 71. 76.13 77.5 55.44. 92.	OC R@95↓ AURC 14 89.52 35 90.05 551 90.00 09 90.43 31 90.83 87 91.46 667 88.81 43 89.28 76 90.39 93 78.50 26 71.96 35 91.62 77 91.47 10 85.31	DD mean C↑ FPR@95. 33.01 31.62 30.09 <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17 30.68 53.82 66.47 28.87 30.02 42.04 47.21	Openi AUROC ² 90.93 91.17 91.55 91.72 92.41 92.64 90.82 91.91 69.94 69.78 92.19 91.54 78.97 90.54	mage-O ↑ FPR095↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.47</u> 34.09 43.08 39.93 37.18 70.15 78.27 38.48 42.66 58.55	iNat/ AUROC1 95.36 94.08 94.50 96.52 95.67 94.26 94.83 95.83 89.06 61.14 96.07 95.60 93.87	uralist FPR@95, 21.61 27.50 17.81 24.33 16.28 20.33 27.56 23.95 19.56 39.14 93.61 20.57 23.50 25.24	Tex AUROC 89.65 93.38 90.32 91.05 94.42 88.31 90.08 84.61 90.28 91.39 89.62 06 07 07 07 07 07 07 07 07 07 07	tures FPR@954 37.34 22.93 33.12 19.42 32.85 19.07 43.72 43.72 43.72 43.73 33.64 49.73 33.64 34.32 35.43 37.81 17.76 17.76 17.76 17.76 17.76 17.75	Color AUROC ⁻ 96.79 96.18 97.10 96.30 97.45 97.45 96.90 97.45 96.90 97.33 <u>97.95</u> 58.85 37.94 98.20 97.87 81.08	Doscopy ↑ FPR@95↓ 17.15 19.71 14.22 16.79 <u>9.86</u> 11.37 17.10 13.52 <u>9.42</u> 89.84 99.37 11.18 68.36 0.9.17	Colo AUROC [↑] 96.06 95.51 96.21 97.79 97.56 94.44 97.00 92.89 75.49 98.62 98.62 98.86 97.63	rectal FPR/0954 20.94 23.60 15.68 17.90 12.36 12.30 30.72 25.94 17.20 34.90 70.74 6.48 5.02 13.10 91.72	N AUROC 99.74 99.67 99.79 99.62 99.83 99.79 99.55 99.64 99.76 99.84 97.32 99.89 99.91 99.99 99.91 99.90	Dise FPR@954 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15 0.49 14.40 0.49 0.39 0.09 1.40 0.49 0.39 0.09 1.40 0.40 0.40 0.40 0.40 0.40 0.54 000000000000000000000000000000	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17 54.29 71.83 64.77 65.12 56.47 65.12 56.04	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 92.60 87.70 93.55 93.45 92.70 92.50 7 <u>5.25</u> 91.95 91.95 91.95
DenseNet-121 ID %Error: 25.58	$\begin{array}{c} \hline \textbf{Method} \\ \hline (MSP, z _1) \\ (MSP, Res.) \\ (DR, Res.) \\ (DR, Res.) \\ (DR, Res.) \\ (DR, Res.) \\ MSP \\ DOCTOR \\ -\mathcal{H} \\ z _1 \\ Residual \\ Max Logit \\ Energy \\ Gradnorm \\ ViM \\ Makel \\ \end{array}$	IDX AUROC† FP 85.99 63. 85.97 63. 85.77 64. 85.72 65. 84.90 67. 84.85 67. 86.11 62. 85.93 66. 47.53 94. 77.97 71. 76.13 75. 95.44 92. 70.16 88. 97.28 94.	OC R0951 AURC 14 89.52 33 90.63 51 90.00 09 90.43 31 90.83 887 91.46 667 88.81 43 89.26 90.39 93 93 78.50 926 71.96 26 71.96 35 91.62 77 91.47 10 85.31 53 89.58 90 68.90	DD mean C↑ FPR@95, 33.01 31.62 30.09 <u>28.80</u> <u>28.80</u> <u>28.44</u> 26.46 36.77 34.17 30.68 53.82 66.47 28.87 30.02 42.04 47.81 81.55	Openi 4 AUROC ¹ 90.93 91.17 91.52 92.41 92.64 90.26 90.82 91.91 69.94 69.78 92.19 91.54 78.97 88.40 90.20	mage-O ↑ FPR@95↓ 39.50 38.58 36.00 <u>35.28</u> <u>34.49</u> 34.09 34.09 34.09 34.09 34.09 34.09 34.09 34.09 34.08 39.93 37.18 70.15 70.15 78.27 38.48 42.66 56.55 56.57 56.67	iNat/ AUROC1 95.36 94.08 95.98 94.50 94.50 94.50 94.50 94.50 94.52 95.67 94.26 94.83 95.83 89.06 61.14 95.60 93.87 88.74 98.70	uralist FPR@95, 21.61 27.50 17.81 24.33 16.28 20.33 27.56 23.95 19.56 39.14 93.61 20.57 23.50 25.24 66.34 66.34	Tex AUROC 89.65 93.38 90.32 91.05 94.42 88.31 88.85 90.08 84.61 90.21 91.59 91.39 89.62 96.64 82.79	tures FPR@95↓ 37.34 22.93 33.12 <u>19.42</u> <u>19.07</u> 43.72 41.01 37.56 43.72 41.01 37.64 34.32 35.43 37.81 17.69 55.43	Color AUROC: 96.79 96.18 97.10 96.30 97.89 97.45 96.30 97.45 96.30 97.33 97.95 58.85 37.94 98.20 98.20 97.87 81.08 82.83	Doscopy ↑ FPR@95↓ 17.15 19.71 14.22 16.79 9.86 11.37 17.10 13.52 9.237 89.84 99.37 8.77 11.18 68.36 89.77	Colo AUROC [↑] 96.06 95.51 96.28 97.79 97.76 94.44 97.00 92.89 75.49 98.86 97.63 95.19 98.86 97.63	rectal FPR/0954 20.94 23.60 15.68 12.30 12.36 12.30 30.72 25.94 17.20 34.90 70.74 6.48 5.02 13.10 31.76 6.34	N AUROC 99.74 99.79 99.62 99.83 99.79 99.64 99.88 97.79 99.64 99.88 97.32 99.89 99.76 99.88 97.32 99.89 99.91 99.96	Dise FPR@95↓ 1.10 0.60 0.83 0.54 0.68 0.39 1.69 1.37 1.15 0.49 1.440 0.49 14.40 0.39 0.01 0.68 35	Imag AUROC 58.10 60.35 58.36 60.83 60.31 62.71 57.97 58.23 60.17 54.29 7 <u>1.83</u> 64.77 65.12 56.04 7 <u>5.6.04</u> 7 <u>5.6.04</u> 7 <u>5.6.04</u>	eNet-O ↑ FPR@95↓ 93.45 88.45 93.00 87.35 93.45 92.50 93.45 92.50 92.50 92.50 92.50 91.95 91.15 73.20 91.15 73.20 60 90

 Table 2. %AUROC and %FPR@95 results for single pre-trained ImageNet-1k models.



Fig. 3. Varying α and β for ResNet-50 (ImageNet-200) (values $\times 10^2$).





Fig. 4. Varying α and β for MobileNetV2 (ImageNet-200) (values $\times 10^2$).



Fig. 5. Varying α and β for DenseNet-121 (ImageNet-200) (values $\times 10^2$).



Fig. 6. ResNet-50 (ImageNet-200), comparing the change in %FPR@95 relative to the MSP baseline for different detection methods and data groups.



Fig. 7. MobileNetV2 (ImageNet-200), comparing the change in %FPR@95 relative to the MSP baseline for different detection methods and data groups.



Fig. 8. DenseNet-121 (ImageNet-200), comparing the change in %FPR@95 relative to the MSP baseline for different detection methods and data groups.



Fig. 9. ResNetV2-101 (ImageNet-1k), comparing the change in %FPR@95 relative to the MSP baseline for different detection methods and data groups.



Fig. 10. DenseNet-121 (ImageNet-1k), comparing the change in %FPR@95 relative to the MSP baseline for different detection methods and data groups.

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the distributions corresponding to the outputs of the 1st run. Decision contours corresponding to the default parameter setting for SIRC are also overlayed. We note that the inconsistency of Residual can be observed here, where in some cases the OOD distribution is much lower than ID, whilst in others, there is almost complete overlap. In the case of MobileNetV2 on iNaturalist it is in fact higher for OOD than ID, although the nature of SIRC means that it is robust to such S_2 failure (as discussed in the main paper).



Fig. 11. SIRC combinations on the S₁, S₂-plane, ID: ImageNet-200, OOD: iNaturalist.



Fig. 12. SIRC combinations on the S₁, S₂-plane, ID: ImageNet-200, OOD: Textures.



Fig. 13. SIRC combinations on the S_1, S_2 -plane, ID ImageNet-1k, OOD: iNaturalist.



Fig. 14. SIRC combinations on the S_1, S_2 -plane, ID ImageNet-1k, OOD: Textures.

References

- Fort, S., Ren, J., Lakshminarayanan, B.: Exploring the limits of out-ofdistribution detection. In: NeurIPS (2021)
- [2] Geifman, Y., El-Yaniv, R.: Selective classification for deep neural networks. In: NIPS (2017)
- [3] Granese, F., Romanelli, M., Gorla, D., Palamidessi, C., Piantanida, P.: Doctor: A simple method for detecting misclassification errors. In: NeurIPS (2021)
- [4] He, K., Zhang, X., Ren, S., Sun, J.: Deep residual learning for image recognition. 2016 IEEE Conference on Computer Vision and Pattern Recognition (CVPR) pp. 770–778 (2016)
- [5] Hendrycks, D., Basart, S., Mazeika, M., Mostajabi, M., Steinhardt, J., Song, D.X.: Scaling out-of-distribution detection for real-world settings. arXiv: Computer Vision and Pattern Recognition (2020)
- [6] Hendrycks, D., Gimpel, K.: A baseline for detecting misclassified and outof-distribution examples in neural networks. ArXiv abs/1610.02136 (2017)
- [7] Hendrycks, D., Zhao, K., Basart, S., Steinhardt, J., Song, D.X.: Natural adversarial examples. 2021 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) pp. 15257–15266 (2021)
- [8] Huang, G., Liu, Z., Weinberger, K.Q.: Densely connected convolutional networks. 2017 IEEE Conference on Computer Vision and Pattern Recognition (CVPR) pp. 2261–2269 (2017)
- [9] Huang, R., Geng, A., Li, Y.: On the importance of gradients for detecting distributional shifts in the wild. In: NeurIPS (2021)
- [10] Huang, R., Li, Y.: Mos: Towards scaling out-of-distribution detection for large semantic space. 2021 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) pp. 8706–8715 (2021)
- [11] Kather, J.N., Weis, C.A., Bianconi, F., Melchers, S.M., Schad, L.R., Gaiser, T., Marx, A., Zöllner, F.G.: Multi-class texture analysis in colorectal cancer histology. Scientific Reports 6 (2016)
- [12] Kim, J., Koo, J., Hwang, S.: A unified benchmark for the unknown detection capability of deep neural networks. ArXiv abs/2112.00337 (2021)
- [13] Kolesnikov, A., Beyer, L., Zhai, X., Puigcerver, J., Yung, J., Gelly, S., Houlsby, N.: Big transfer (bit): General visual representation learning. In: ECCV (2020)
- [14] Lee, K., Lee, K., Lee, H., Shin, J.: A simple unified framework for detecting out-of-distribution samples and adversarial attacks. In: NeurIPS (2018)
- [15] Liu, W., Wang, X., Owens, J.D., Li, Y.: Energy-based out-of-distribution detection. ArXiv abs/2010.03759 (2020)
- [16] Mesejo, P., Pizarro, D., Abergel, A., Rouquette, O.Y., Béorchia, S., Poincloux, L., Bartoli, A.: Computer-aided classification of gastrointestinal lesions in regular colonoscopy. IEEE transactions on medical imaging (2016)

- [17] Mukhoti, J., Kirsch, A., van Amersfoort, J.R., Torr, P.H.S., Gal, Y.: Deterministic neural networks with appropriate inductive biases capture epistemic and aleatoric uncertainty. ArXiv abs/2102.11582 (2021)
- [18] Sandler, M., Howard, A.G., Zhu, M., Zhmoginov, A., Chen, L.C.: Mobilenetv2: Inverted residuals and linear bottlenecks. 2018 IEEE/CVF Conference on Computer Vision and Pattern Recognition pp. 4510–4520 (2018)
- [19] Wang, H., Li, Z., Feng, L., Zhang, W.: Vim: Out-of-distribution with virtuallogit matching. ArXiv abs/2203.10807 (2022)