

Ensembles on Random Patches

Supplementary materials

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A On accuracy

Table 1: Accuracy on small datasets (in %).

Validation	RF	ET	P-DT	P-ET	RS-DT	RS-ET	RP-DT	RP-ET
DIABETES	77.12 (6)	77.25 (5)	77.67 (4)	78.01 (3)	75.11 (8)	76.77 (7)	78.82 (2)	79.07 (1)
DIG44	94.99 (7)	95.78 (1)	91.86 (8)	95.46 (4)	95.07 (6)	95.69 (3)	95.13 (5)	95.72 (2)
IONOSPHERE	94.40 (6)	95.15 (3)	93.86 (8)	94.75 (5)	94.11 (7)	94.90 (4)	95.20 (2)	95.36 (1)
PENDIGITS	98.94 (7)	99.33 (1)	98.09 (8)	99.28 (4)	99.02 (6)	99.31 (3)	99.07 (5)	99.32 (2)
LETTER	95.36 (7)	96.38 (1)	92.72 (8)	95.87 (4)	95.68 (6)	96.08 (3)	95.74 (5)	96.10 (2)
LIVER	72.37 (5)	71.90 (6)	72.55 (4)	72.88 (3)	68.06 (8)	70.88 (7)	74.53 (1)	74.37 (2)
MUSK2	97.18 (7)	97.73 (1)	96.89 (8)	97.60 (4)	97.58 (6)	97.72 (3)	97.60 (5)	97.73 (2)
RING-NORM	97.44 (6)	98.10 (5)	96.41 (8)	97.28 (7)	98.25 (4)	98.41 (3)	98.50 (2)	98.54 (1)
SATELLITE	90.97 (7)	91.56 (1)	90.01 (8)	91.40 (5)	91.31 (6)	91.50 (3)	91.41 (4)	91.54 (2)
SEGMENT	97.46 (6)	98.17 (2)	96.78 (8)	98.10 (4)	97.33 (7)	98.14 (3)	97.52 (5)	98.21 (1)
SONAR	82.92 (7)	86.92 (3)	80.03 (8)	84.73 (5)	83.07 (6)	87.07 (2)	85.42 (4)	88.15 (1)
SPAMBASE	94.80 (7)	95.36 (3)	93.69 (8)	95.01 (6)	95.01 (5)	95.50 (2)	95.11 (4)	95.57 (1)
TWO-NORM	97.54 (6)	97.77 (2)	97.52 (7)	97.59 (5)	97.46 (8)	97.63 (4)	97.76 (3)	97.82 (1)
VEHICLE	88.67 (5)	88.68 (4)	88.26 (8)	88.74 (3)	88.41 (7)	88.60 (6)	89.22 (1)	89.21 (2)
VOWEL	92.04 (5)	95.12 (1)	85.19 (8)	93.49 (4)	89.76 (7)	94.34 (3)	91.10 (6)	94.48 (2)
WAVEFORM	85.45 (6)	85.96 (2)	84.89 (8)	85.68 (5)	84.91 (7)	85.69 (4)	85.85 (3)	86.21 (1)
<i>Avg. rank</i>	6.25	2.5625	7.4375	4.4375	6.5	3.75	3.5626	1.5
Test	RF	ET	P-DT	P-ET	RS-DT	RS-ET	RP-DT	RP-ET
DIABETES	75.62 (4)	75.38 (5)	75.67 (3)	76.34 (1)	73.03 (8)	74.63 (7)	75.32 (6)	75.82 (2)
DIG44	94.96 (6)	95.67 (1)	91.79 (8)	95.39 (4)	94.98 (5)	95.58 (2)	94.95 (7)	95.55 (3)
IONOSPHERE	92.20 (6)	93.22 (1)	92.09 (7)	92.40 (4)	92.02 (8)	93.22 (2)	92.34 (5)	92.68 (3)
PENDIGITS	98.84 (7)	99.23 (1)	97.97 (8)	99.21 (3)	98.95 (5)	99.21 (2)	98.93 (6)	99.20 (4)
LETTER	95.27 (7)	96.29 (1)	92.57 (8)	95.89 (4)	95.61 (5)	96.03 (2)	95.61 (6)	95.99 (3)
LIVER	69.95 (3)	68.22 (6)	70.43 (1)	69.58 (5)	63.17 (8)	67.35 (7)	70.20 (2)	69.67 (4)
MUSK2	97.08 (7)	97.61 (1)	96.69 (8)	97.54 (4)	97.47 (5)	97.58 (2)	97.42 (6)	97.56 (3)
RING-NORM	97.48 (6)	98.07 (5)	96.42 (8)	97.25 (7)	98.16 (4)	98.31 (1)	98.22 (3)	98.30 (2)
SATELLITE	90.67 (7)	91.22 (2)	89.66 (8)	91.20 (3)	91.15 (5)	91.28 (1)	91.04 (6)	91.20 (4)
SEGMENT	97.02 (5)	97.93 (1)	96.44 (8)	97.86 (3)	96.86 (7)	97.90 (2)	96.88 (6)	97.84 (4)
SONAR	79.53 (5)	82.76 (1)	75.15 (8)	80.07 (4)	78.50 (6)	82.19 (2)	78.26 (7)	81.92 (3)
SPAMBASE	94.76 (7)	95.17 (3)	93.51 (8)	94.84 (5)	94.88 (4)	95.22 (2)	94.80 (6)	95.22 (1)
TWO-NORM	97.22 (7)	97.50 (1)	97.26 (6)	97.29 (4)	97.20 (8)	97.33 (2)	97.33 (3)	97.28 (5)
VEHICLE	87.47 (7)	87.85 (3)	87.01 (8)	87.98 (2)	87.50 (6)	87.68 (5)	87.73 (4)	88.08 (1)
VOWEL	91.51 (5)	93.95 (1)	84.17 (8)	92.93 (4)	89.51 (7)	93.60 (2)	89.89 (6)	93.09 (3)
WAVEFORM	85.23 (5)	85.77 (1)	84.68 (8)	85.40 (3)	84.74 (7)	85.38 (4)	85.16 (6)	85.56 (2)
<i>Avg. rank</i>	5.875	2.125	7.0625	3.75	6.125	2.8125	5.3125	2.9375

Table 2: Accuracy on large datasets (in %).

Validation	RF	ET	P-DT	P-ET	RS-DT	RS-ET	RP-DT	RP-ET
CIFAR10	45.16 (6)	46.17 (1)	44.92 (7)	44.88 (8)	45.83 (5)	46.09 (3)	45.89 (4)	46.13 (2)
MNIST3V8	98.42 (7)	98.77 (5)	97.63 (8)	98.57 (6)	98.79 (4)	98.86 (2)	98.81 (3)	98.87 (1)
MNIST4V9	98.47 (7)	98.82 (3)	97.39 (8)	98.47 (6)	98.77 (5)	98.89 (2)	98.80 (4)	98.91 (1)
MNIST	96.14 (7)	96.56 (3)	94.35 (8)	96.19 (6)	96.52 (5)	96.57 (2)	96.53 (4)	96.57 (1)
ISOLET	93.96 (7)	95.07 (3)	90.90 (8)	94.23 (6)	94.38 (5)	95.15 (2)	94.47 (4)	95.20 (1)
ARCENE	73.84 (7)	77.76 (3)	73.76 (8)	75.12 (6)	76.40 (5)	77.60 (4)	79.44 (2)	80.00 (1)
BREAST2	69.64 (6)	69.91 (4)	70.54 (3)	69.83 (5)	69.59 (7)	69.54 (8)	72.59 (1)	71.62 (2)
MADELON	76.12 (8)	81.41 (1)	78.48 (7)	81.06 (5)	80.68 (6)	81.29 (3)	81.18 (4)	81.36 (2)
MARTI	87.66 (8)	87.92 (6)	88.08 (4)	88.09 (3)	87.77 (7)	88.00 (5)	88.19 (2)	88.20 (1)
REGED	98.00 (6)	98.46 (2)	97.08 (8)	98.24 (5)	98.00 (7)	98.41 (3)	98.40 (4)	98.57 (1)
SECOM	93.37 (5)	93.36 (6)	93.34 (8)	93.42 (2)	93.35 (7)	93.40 (4)	93.41 (3)	93.45 (1)
TIS	91.81 (5)	91.53 (7)	91.59 (6)	91.50 (8)	92.04 (3)	91.97 (4)	92.26 (1)	92.06 (2)
SIDO	97.46 (5)	97.44 (6)	97.36 (8)	97.36 (7)	97.47 (3)	97.46 (4)	97.52 (1)	97.52 (2)
<i>Avg. rank</i>	6.4615	3.8461	7.0	5.6153	5.3076	3.5384	2.8461	1.3846
Test	RF	ET	P-DT	P-ET	RS-DT	RS-ET	RP-DT	RP-ET
CIFAR10	44.87 (7)	45.95 (2)	44.75 (8)	44.95 (6)	45.86 (4)	46.02 (1)	45.74 (5)	45.93 (3)
MNIST3V8	98.31 (7)	98.64 (5)	97.47 (8)	98.48 (6)	98.70 (2)	98.71 (1)	98.68 (4)	98.68 (3)
MNIST4V9	98.33 (6)	98.68 (2)	97.16 (8)	98.32 (7)	98.59 (4)	98.69 (1)	98.59 (5)	98.67 (3)
MNIST	96.10 (7)	96.47 (3)	94.30 (8)	96.18 (6)	96.47 (4)	96.49 (1)	96.46 (5)	96.48 (2)
ISOLET	93.87 (7)	94.95 (1)	90.71 (8)	94.15 (6)	94.33 (4)	94.94 (2)	94.29 (5)	94.88 (3)
ARCENE	71.04 (4)	72.56 (1)	66.16 (8)	68.56 (7)	71.52 (3)	72.24 (2)	69.44 (6)	70.00 (5)
BREAST2	65.86 (6)	66.16 (1)	65.54 (8)	65.59 (7)	66.13 (2)	65.91 (5)	65.94 (4)	66.08 (3)
MADELON	75.33 (8)	80.83 (1)	77.86 (7)	80.78 (2)	80.06 (6)	80.59 (3)	80.06 (5)	80.42 (4)
MARTI	87.74 (8)	87.85 (6)	88.24 (1)	88.17 (2)	87.82 (7)	88.06 (4)	88.08 (3)	88.01 (5)
REGED	97.60 (5)	98.20 (1)	96.40 (8)	97.92 (3)	97.39 (6)	98.00 (2)	97.32 (7)	97.82 (4)
SECOM	93.30 (7)	93.22 (8)	93.38 (1)	93.30 (6)	93.37 (2)	93.31 (4)	93.33 (3)	93.31 (5)
TIS	91.68 (5)	91.42 (7)	91.49 (6)	91.40 (8)	92.05 (1)	91.91 (3)	92.05 (2)	91.90 (4)
SIDO	97.33 (4)	97.33 (3)	97.26 (7)	97.26 (8)	97.35 (1)	97.34 (2)	97.33 (5)	97.32 (6)
<i>Avg. rank</i>	6.2307	3.1538	6.6153	5.6923	3.5384	2.3846	4.5384	3.8461