# DE-Forest


No Author Given

No Institute Given


## 1 Results

**Table 1.** BAC

| Dataset name | DE-Forest-gm | DE-Forest-AUC | DE-Forest-bac | DE-Forest-gm-b | DE-Forest-AUC-b | DE-Forest-bac-b | RandomFS | RandomFS-b | DT | RF | RF-b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $datasets_{a}ll/glass5.dat$ | 0.717 ± 0.186 | 0.655 ± 0.128 | 0.668 ± 0.141 | 0.512 ± 0.038 | 0.512 ± 0.038 | 0.512 ± 0.038 | 0.601 ± 0.101 | 0.570 ± 0.141 | **0.767 ± 0.179** | 0.705 ± 0.111 | 0.638 ± 0.097 |
| $datasets_{a}ll/winequality-white-9_{v}s_{4}.dat$ | 0.539 ± 0.087 | 0.539 ± 0.087 | 0.539 ± 0.087 | 0.567 ± 0.104 | 0.567 ± 0.104 | 0.567 ± 0.104 | 0.498 ± 0.006 | 0.500 ± 0.000 | **0.572 ± 0.107** | 0.549 ± 0.099 | 0.517 ± 0.050 |
| $datasets_{a}ll/winequality-red-8_{v}s_{6}-7.dat$ | **0.560 ± 0.017** | 0.559 ± 0.017 | 0.559 ± 0.017 | 0.555 ± 0.000 | 0.555 ± 0.000 | 0.555 ± 0.000 | 0.555 ± 0.000 | 0.550 ± 0.017 | 0.558 ± 0.035 | 0.554 ± 0.002 | 0.533 ± 0.027 |
| $datasets_{a}ll/yeast1.dat$ | 0.624 ± 0.019 | 0.626 ± 0.009 | 0.619 ± 0.014 | 0.596 ± 0.009 | 0.597 ± 0.010 | 0.596 ± 0.012 | 0.514 ± 0.015 | 0.519 ± 0.015 | 0.634 ± 0.013 | **0.657 ± 0.009** | 0.645 ± 0.015 |
| $datasets_{a}ll/yeast6.dat$ | 0.606 ± 0.049 | 0.623 ± 0.039 | 0.601 ± 0.041 | 0.584 ± 0.037 | 0.584 ± 0.037 | 0.587 ± 0.036 | 0.503 ± 0.009 | 0.512 ± 0.019 | **0.725 ± 0.053** | 0.669 ± 0.034 | 0.619 ± 0.036 |
| $datasets_{a}ll/cleveland-0_{v}s_{4}.dat$ | 0.601 ± 0.088 | 0.590 ± 0.060 | 0.590 ± 0.068 | 0.630 ± 0.111 | 0.630 ± 0.111 | 0.622 ± 0.118 | 0.521 ± 0.035 | 0.532 ± 0.040 | **0.647 ± 0.064** | 0.634 ± 0.100 | 0.618 ± 0.099 |
| $datasets_{a}ll/ecoli-0-1_{v}s_{2}-3-5.dat$ | 0.752 ± 0.078 | 0.751 ± 0.078 | 0.767 ± 0.071 | 0.750 ± 0.076 | 0.750 ± 0.076 | 0.750 ± 0.076 | 0.641 ± 0.080 | 0.604 ± 0.057 | **0.809 ± 0.061** | 0.807 ± 0.057 | 0.776 ± 0.058 |
| $datasets_{a}ll/yeast-1_{v}s_{7}.dat$ | 0.560 ± 0.035 | 0.559 ± 0.044 | 0.590 ± 0.054 | 0.563 ± 0.034 | 0.563 ± 0.034 | 0.541 ± 0.037 | 0.510 ± 0.021 | 0.505 ± 0.014 | **0.656 ± 0.051** | 0.578 ± 0.034 | 0.556 ± 0.034 |
| $datasets_{a}ll/abalone-21_{v}s_{8}.dat$ | 0.674 ± 0.071 | 0.674 ± 0.071 | 0.674 ± 0.071 | 0.606 ± 0.085 | 0.606 ± 0.085 | 0.606 ± 0.085 | 0.578 ± 0.067 | 0.549 ± 0.056 | 0.665 ± 0.084 | 0.690 ± 0.089 | **0.711 ± 0.099** |
| $datasets_{a}ll/abalone19.dat$ | 0.499 ± 0.001 | 0.502 ± 0.009 | 0.502 ± 0.009 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.508 ± 0.016** | 0.503 ± 0.009 | 0.500 ± 0.000 |
| $datasets_{a}ll/poker-9_{v}s_{7}.dat$ | 0.610 ± 0.120 | 0.610 ± 0.120 | 0.610 ± 0.120 | 0.500 ± 0.000 | 0.512 ± 0.038 | 0.512 ± 0.038 | 0.550 ± 0.062 | 0.512 ± 0.036 | **0.655 ± 0.127** | 0.650 ± 0.109 | 0.512 ± 0.038 |
| $datasets_{a}ll/ecoli3.dat$ | 0.681 ± 0.056 | 0.684 ± 0.067 | 0.683 ± 0.048 | 0.673 ± 0.060 | 0.673 ± 0.060 | 0.679 ± 0.057 | 0.519 ± 0.035 | 0.533 ± 0.040 | **0.715 ± 0.050** | 0.707 ± 0.063 | 0.683 ± 0.067 |
| $datasets_{a}ll/abalone-17_{v}s_{7}-8-9-10.dat$ | 0.570 ± 0.041 | 0.563 ± 0.026 | 0.570 ± 0.035 | 0.536 ± 0.027 | 0.536 ± 0.027 | 0.539 ± 0.028 | 0.505 ± 0.015 | 0.505 ± 0.008 | **0.616 ± 0.041** | 0.563 ± 0.020 | 0.549 ± 0.027 |
| $datasets_{a}ll/glass-0-1-6_{v}s_{5}.dat$ | 0.739 ± 0.087 | 0.742 ± 0.132 | 0.742 ± 0.132 | 0.609 ± 0.079 | 0.609 ± 0.079 | 0.609 ± 0.079 | 0.676 ± 0.159 | 0.559 ± 0.099 | **0.842 ± 0.118** | 0.734 ± 0.129 | 0.650 ± 0.128 |
| $datasets_{a}ll/ecoli-0-1-3-7_{v}s_{2}-6.dat$ | 0.579 ± 0.109 | 0.579 ± 0.109 | 0.579 ± 0.109 | 0.562 ± 0.107 | 0.562 ± 0.107 | 0.562 ± 0.107 | 0.516 ± 0.047 | 0.500 ± 0.000 | **0.752 ± 0.157** | 0.628 ± 0.119 | 0.500 ± 0.000 |
| $datasets_{a}ll/yeast-0-2-5-6_{v}s_{3}-7-8-9.dat$ | 0.674 ± 0.038 | 0.674 ± 0.038 | 0.679 ± 0.039 | 0.646 ± 0.047 | 0.646 ± 0.047 | 0.658 ± 0.039 | 0.536 ± 0.036 | 0.530 ± 0.023 | **0.719 ± 0.030** | 0.699 ± 0.035 | 0.694 ± 0.018 |
| $datasets_{a}ll/yeast5.dat$ | 0.727 ± 0.058 | 0.731 ± 0.042 | 0.733 ± 0.042 | 0.653 ± 0.057 | 0.653 ± 0.057 | 0.653 ± 0.057 | 0.513 ± 0.015 | 0.511 ± 0.015 | **0.798 ± 0.077** | 0.754 ± 0.056 | 0.693 ± 0.027 |
| $datasets_{a}ll/glass-0-1-4-6_{v}s_{2}.dat$ | **0.540 ± 0.049** | 0.524 ± 0.053 | 0.523 ± 0.052 | 0.504 ± 0.017 | 0.504 ± 0.017 | 0.503 ± 0.018 | 0.507 ± 0.025 | 0.499 ± 0.002 | 0.537 ± 0.065 | 0.518 ± 0.029 | 0.508 ± 0.027 |
| $datasets_{a}ll/yeast-0-5-6-7-9_{v}s_{4}.dat$ | 0.613 ± 0.043 | 0.621 ± 0.051 | 0.620 ± 0.034 | 0.566 ± 0.024 | 0.566 ± 0.024 | 0.566 ± 0.024 | 0.501 ± 0.006 | 0.502 ± 0.006 | **0.669 ± 0.041** | 0.619 ± 0.036 | 0.614 ± 0.055 |
| $datasets_{a}ll/yeast3.dat$ | 0.814 ± 0.028 | 0.804 ± 0.028 | 0.810 ± 0.031 | 0.755 ± 0.043 | 0.755 ± 0.043 | 0.764 ± 0.043 | 0.502 ± 0.006 | 0.504 ± 0.009 | **0.836 ± 0.028** | 0.813 ± 0.034 | 0.807 ± 0.039 |
| $datasets_{a}ll/kr-vs-k-zero_{v}s_{e}ight.dat$ | 0.822 ± 0.117 | 0.840 ± 0.128 | 0.840 ± 0.128 | 0.847 ± 0.081 | 0.874 ± 0.086 | 0.874 ± 0.086 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.953 ± 0.057 | **0.959 ± 0.046** | 0.914 ± 0.060 |
| $datasets_{a}ll/ecoli-0-6-7_{v}s_{3}-5.dat$ | 0.771 ± 0.068 | 0.767 ± 0.077 | 0.767 ± 0.077 | 0.620 ± 0.061 | 0.620 ± 0.061 | 0.621 ± 0.061 | 0.543 ± 0.057 | 0.544 ± 0.042 | **0.823 ± 0.066** | 0.815 ± 0.059 | 0.823 ± 0.040 |
| $datasets_{a}ll/kddcup-rootkit-imap_{v}s_{b}ack.dat$ | 0.991 ± 0.027 | 0.991 ± 0.027 | 0.991 ± 0.027 | 0.936 ± 0.046 | 0.936 ± 0.046 | 0.936 ± 0.046 | 0.955 ± 0.054 | 0.905 ± 0.085 | **1.000 ± 0.000** | 0.977 ± 0.023 | 0.964 ± 0.027 |
| $datasets_{a}ll/winequality-red-8_{v}s_{6}.dat$ | 0.552 ± 0.024 | 0.568 ± 0.047 | 0.569 ± 0.047 | 0.553 ± 0.035 | 0.553 ± 0.035 | 0.554 ± 0.035 | 0.544 ± 0.022 | 0.516 ± 0.026 | **0.604 ± 0.069** | 0.557 ± 0.029 | 0.532 ± 0.028 |
| $datasets_{a}ll/flare-F.dat$ | 0.523 ± 0.019 | 0.530 ± 0.026 | 0.526 ± 0.024 | 0.540 ± 0.035 | 0.527 ± 0.026 | 0.532 ± 0.042 | 0.502 ± 0.007 | 0.500 ± 0.001 | 0.570 ± 0.032 | **0.570 ± 0.024** | 0.555 ± 0.026 |
| $datasets_{a}ll/glass4.dat$ | 0.685 ± 0.095 | 0.705 ± 0.118 | 0.708 ± 0.118 | 0.601 ± 0.075 | 0.601 ± 0.075 | 0.601 ± 0.075 | 0.627 ± 0.087 | 0.619 ± 0.071 | **0.799 ± 0.080** | 0.711 ± 0.079 | 0.666 ± 0.062 |
| $datasets_{a}ll/haberman.dat$ | 0.560 ± 0.031 | 0.555 ± 0.043 | 0.553 ± 0.042 | 0.545 ± 0.042 | 0.551 ± 0.038 | 0.538 ± 0.039 | 0.521 ± 0.032 | 0.513 ± 0.019 | **0.562 ± 0.041** | 0.552 ± 0.039 | 0.537 ± 0.041 |
| $datasets_{a}ll/poker-8-9_{v}s_{6}.dat$ | 0.552 ± 0.065 | 0.532 ± 0.047 | 0.540 ± 0.048 | 0.529 ± 0.032 | 0.529 ± 0.032 | 0.529 ± 0.032 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.572 ± 0.066** | 0.544 ± 0.055 | 0.516 ± 0.020 |
| $datasets_{a}ll/yeast-1-4-5-8_{v}s_{7}.dat$ | 0.499 ± 0.002 | 0.498 ± 0.002 | 0.500 ± 0.010 | 0.505 ± 0.013 | 0.505 ± 0.013 | 0.505 ± 0.013 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.519 ± 0.023** | 0.504 ± 0.014 | 0.509 ± 0.015 |
| $datasets_{a}ll/ecoli-0-2-6-7_{v}s_{3}-5.dat$ | 0.714 ± 0.134 | 0.700 ± 0.141 | 0.710 ± 0.132 | 0.663 ± 0.105 | 0.663 ± 0.105 | 0.663 ± 0.105 | 0.574 ± 0.105 | 0.557 ± 0.058 | **0.796 ± 0.067** | 0.792 ± 0.073 | 0.774 ± 0.046 |
| $datasets_{a}ll/glass-0-1-6_{v}s_{2}.dat$ | 0.547 ± 0.041 | 0.530 ± 0.039 | 0.531 ± 0.039 | 0.517 ± 0.028 | 0.517 ± 0.028 | 0.511 ± 0.024 | 0.508 ± 0.029 | 0.516 ± 0.029 | **0.564 ± 0.051** | 0.562 ± 0.068 | 0.515 ± 0.026 |
| $datasets_{a}ll/yeast4.dat$ | 0.565 ± 0.044 | 0.561 ± 0.040 | 0.562 ± 0.042 | 0.545 ± 0.026 | 0.547 ± 0.027 | 0.540 ± 0.024 | 0.510 ± 0.016 | 0.500 ± 0.000 | **0.619 ± 0.046** | 0.578 ± 0.040 | 0.549 ± 0.023 |
| $datasets_{a}ll/page-blocks0.dat$ | 0.899 ± 0.014 | 0.898 ± 0.016 | 0.896 ± 0.014 | 0.886 ± 0.013 | 0.886 ± 0.013 | 0.883 ± 0.022 | 0.854 ± 0.019 | 0.855 ± 0.023 | 0.903 ± 0.016 | **0.909 ± 0.015** | 0.905 ± 0.011 |
| $datasets_{a}ll/ecoli-0-1-4-7_{v}s_{2}-3-5-6.dat$ | 0.760 ± 0.075 | 0.722 ± 0.065 | 0.745 ± 0.059 | 0.683 ± 0.083 | 0.683 ± 0.083 | 0.670 ± 0.075 | 0.558 ± 0.026 | 0.582 ± 0.066 | **0.831 ± 0.053** | 0.784 ± 0.048 | 0.749 ± 0.048 |
| $datasets_{a}ll/poker-8_{v}s_{6}.dat$ | 0.519 ± 0.056 | 0.525 ± 0.057 | 0.525 ± 0.057 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.539 ± 0.113** | 0.512 ± 0.038 | 0.500 ± 0.000 |
| $datasets_{a}ll/ecoli1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/glass0.dat$ | **0.797 ± 0.043** | 0.797 ± 0.024 | 0.797 ± 0.048 | 0.792 ± 0.040 | 0.792 ± 0.040 | 0.785 ± 0.041 | 0.786 ± 0.033 | 0.731 ± 0.056 | 0.757 ± 0.039 | 0.784 ± 0.044 | 0.775 ± 0.065 |
| $datasets_{a}ll/winequality-red-4.dat$ | 0.507 ± 0.015 | 0.502 ± 0.007 | 0.501 ± 0.007 | 0.509 ± 0.013 | 0.509 ± 0.013 | 0.503 ± 0.008 | 0.502 ± 0.006 | 0.500 ± 0.000 | **0.534 ± 0.039** | 0.510 ± 0.015 | 0.507 ± 0.009 |
| $datasets_{a}ll/pima.dat$ | 0.657 ± 0.026 | 0.667 ± 0.030 | 0.655 ± 0.023 | 0.661 ± 0.029 | 0.672 ± 0.012 | 0.657 ± 0.020 | 0.586 ± 0.026 | 0.588 ± 0.031 | 0.654 ± 0.021 | **0.687 ± 0.016** | 0.678 ± 0.026 |
| $datasets_{a}ll/abalone-19_{v}s_{1}0-11-12-13.dat$ | 0.502 ± 0.010 | 0.505 ± 0.013 | 0.506 ± 0.013 | 0.500 ± 0.001 | 0.500 ± 0.001 | 0.500 ± 0.001 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.514 ± 0.031** | 0.499 ± 0.001 | 0.503 ± 0.009 |
| $datasets_{a}ll/ecoli2.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/abalone9-18.dat$ | 0.614 ± 0.053 | 0.615 ± 0.047 | 0.604 ± 0.052 | 0.543 ± 0.021 | 0.543 ± 0.021 | 0.535 ± 0.019 | 0.501 ± 0.007 | 0.511 ± 0.020 | **0.630 ± 0.052** | 0.592 ± 0.052 | 0.549 ± 0.031 |
| $datasets_{a}ll/yeast-1-2-8-9_{v}s_{7}.dat$ | 0.541 ± 0.030 | 0.546 ± 0.039 | 0.534 ± 0.028 | 0.515 ± 0.027 | 0.519 ± 0.027 | 0.519 ± 0.027 | 0.507 ± 0.013 | 0.500 ± 0.000 | **0.598 ± 0.056** | 0.540 ± 0.029 | 0.525 ± 0.032 |
| $datasets_{a}ll/winequality-white-3_{v}s_{7}.dat$ | 0.578 ± 0.068 | 0.593 ± 0.053 | 0.588 ± 0.038 | 0.559 ± 0.049 | 0.559 ± 0.049 | 0.559 ± 0.049 | 0.520 ± 0.024 | 0.525 ± 0.046 | **0.635 ± 0.096** | 0.604 ± 0.065 | 0.565 ± 0.050 |
| $datasets_{a}ll/yeast-2_{v}s_{4}.dat$ | 0.767 ± 0.041 | 0.779 ± 0.049 | 0.767 ± 0.047 | 0.790 ± 0.050 | 0.790 ± 0.050 | 0.790 ± 0.050 | 0.597 ± 0.047 | 0.617 ± 0.065 | **0.828 ± 0.031** | 0.817 ± 0.023 | 0.817 ± 0.034 |
| $datasets_{a}ll/winequality-red-3_{v}s_{5}.dat$ | 0.499 ± 0.002 | 0.498 ± 0.002 | 0.498 ± 0.002 | 0.500 ± 0.001 | 0.500 ± 0.001 | 0.500 ± 0.001 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.543 ± 0.064** | 0.499 ± 0.002 | 0.500 ± 0.000 |
| $datasets_{a}ll/glass2.dat$ | 0.531 ± 0.043 | 0.540 ± 0.056 | 0.534 ± 0.058 | 0.518 ± 0.039 | 0.518 ± 0.039 | 0.518 ± 0.039 | 0.533 ± 0.050 | 0.509 ± 0.022 | **0.598 ± 0.085** | 0.570 ± 0.072 | 0.523 ± 0.057 |
| $datasets_{a}ll/yeast-2_{v}s_{8}.dat$ | 0.723 ± 0.092 | 0.688 ± 0.104 | 0.688 ± 0.104 | 0.549 ± 0.094 | 0.549 ± 0.094 | 0.549 ± 0.094 | 0.505 ± 0.015 | 0.505 ± 0.015 | **0.731 ± 0.088** | 0.688 ± 0.088 | 0.614 ± 0.104 |
| $datasets_{a}ll/glass1.dat$ | 0.747 ± 0.061 | **0.748 ± 0.041** | 0.739 ± 0.043 | 0.723 ± 0.026 | 0.723 ± 0.026 | 0.716 ± 0.030 | 0.729 ± 0.052 | 0.705 ± 0.033 | 0.712 ± 0.032 | 0.746 ± 0.050 | 0.746 ± 0.058 |
| $datasets_{a}ll/zoo-3.dat$ | 0.591 ± 0.113 | 0.574 ± 0.113 | 0.574 ± 0.113 | 0.549 ± 0.101 | 0.549 ± 0.101 | 0.549 ± 0.101 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.590 ± 0.107 | 0.581 ± 0.107 | **0.600 ± 0.128** |
| $datasets_{a}ll/glass-0-1-5_{v}s_{2}.dat$ | 0.560 ± 0.065 | 0.535 ± 0.066 | 0.543 ± 0.063 | 0.497 ± 0.006 | 0.497 ± 0.006 | 0.497 ± 0.006 | 0.522 ± 0.037 | 0.510 ± 0.025 | **0.578 ± 0.064** | 0.572 ± 0.053 | 0.510 ± 0.021 |
| $datasets_{a}ll/abalone-20_{v}s_{8}-9-10.dat$ | 0.534 ± 0.039 | 0.534 ± 0.031 | 0.526 ± 0.030 | 0.504 ± 0.012 | 0.504 ± 0.012 | 0.504 ± 0.012 | 0.504 ± 0.012 | 0.500 ± 0.000 | **0.591 ± 0.070** | 0.530 ± 0.042 | 0.519 ± 0.019 |
| $datasets_{a}ll/kddcup-buffer_{o}verflow_{v}s_{b}ack.dat$ | 0.993 ± 0.020 | 0.993 ± 0.020 | 0.993 ± 0.020 | 0.947 ± 0.079 | 0.947 ± 0.079 | 0.947 ± 0.079 | 0.940 ± 0.063 | 0.907 ± 0.044 | **1.000 ± 0.000** | **1.000 ± 0.000** | 0.990 ± 0.015 |
| $datasets_{a}ll/winequality-white-3-9_{v}s_{5}.dat$ | 0.503 ± 0.012 | 0.511 ± 0.026 | 0.511 ± 0.026 | 0.504 ± 0.012 | 0.504 ± 0.012 | 0.500 ± 0.001 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.574 ± 0.052** | 0.551 ± 0.061 | 0.511 ± 0.019 |
| $datasets_{a}ll/vehicle3.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/vehicle1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/page-blocks-1-3_{v}s_{4}.dat$ | 0.923 ± 0.064 | 0.933 ± 0.054 | 0.933 ± 0.054 | 0.909 ± 0.047 | 0.909 ± 0.047 | 0.909 ± 0.047 | 0.891 ± 0.040 | 0.877 ± 0.057 | **0.938 ± 0.069** | 0.934 ± 0.041 | 0.906 ± 0.066 |
| $datasets_{a}ll/ecoli-0-6-7_{v}s_{5}.dat$ | 0.729 ± 0.156 | 0.716 ± 0.170 | 0.716 ± 0.170 | 0.692 ± 0.085 | 0.692 ± 0.085 | 0.692 ± 0.085 | 0.567 ± 0.054 | 0.593 ± 0.064 | **0.833 ± 0.067** | 0.823 ± 0.084 | 0.800 ± 0.103 |
| $datasets_{a}ll/poker-8-9_{v}s_{5}.dat$ | 0.500 ± 0.000 | 0.504 ± 0.012 | 0.504 ± 0.012 | 0.504 ± 0.013 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | 0.500 ± 0.000 | **0.586 ± 0.072** | 0.508 ± 0.017 | 0.500 ± 0.000 |
| $datasets_{a}ll/yeast-0-3-5-9_{v}s_{7}-8.dat$ | 0.578 ± 0.025 | 0.578 ± 0.031 | 0.577 ± 0.028 | 0.544 ± 0.031 | 0.544 ± 0.031 | 0.546 ± 0.025 | 0.505 ± 0.013 | 0.506 ± 0.012 | **0.618 ± 0.045** | 0.573 ± 0.016 | 0.575 ± 0.035 |

**Table 2.** F1score

| Dataset name | DE-Forest-gm | DE-Forest-AUC | DE-Forest-bac | DE-Forest-gm-b | DE-Forest-AUC-b | DE-Forest-bac-b | RandomFS | RandomFS-b | DT | RF | RF-b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $datasets_{a}ll/glass5.dat$ | 0.959 ± 0.022 | 0.954 ± 0.019 | 0.956 ± 0.019 | 0.939 ± 0.010 | 0.939 ± 0.010 | 0.939 ± 0.010 | 0.951 ± 0.016 | 0.947 ± 0.017 | 0.956 ± 0.022 | **0.965 ± 0.014** | 0.956 ± 0.012 |
| $datasets_{a}ll/winequality-white-9_{v}s_{4}.dat$ | 0.958 ± 0.014 | 0.958 ± 0.014 | 0.958 ± 0.014 | **0.962 ± 0.015** | **0.962 ± 0.015** | **0.962 ± 0.015** | 0.953 ± 0.008 | 0.956 ± 0.009 | 0.951 ± 0.016 | 0.958 ± 0.014 | 0.958 ± 0.009 |
| $datasets_{a}ll/winequality-red-8_{v}s_{6}-7.dat$ | 0.973 ± 0.002 | 0.972 ± 0.003 | 0.972 ± 0.003 | **0.974 ± 0.000** | **0.974 ± 0.000** | **0.974 ± 0.000** | 0.974 ± 0.000 | 0.973 ± 0.002 | 0.959 ± 0.005 | 0.972 ± 0.002 | 0.971 ± 0.003 |
| $datasets_{a}ll/yeast1.dat$ | 0.716 ± 0.017 | 0.718 ± 0.006 | 0.712 ± 0.012 | 0.696 ± 0.008 | 0.697 ± 0.009 | 0.697 ± 0.011 | 0.610 ± 0.019 | 0.617 ± 0.019 | 0.698 ± 0.010 | **0.742 ± 0.009** | 0.734 ± 0.013 |
| $datasets_{a}ll/yeast6.dat$ | 0.972 ± 0.004 | 0.973 ± 0.003 | 0.972 ± 0.003 | 0.972 ± 0.003 | 0.972 ± 0.003 | 0.972 ± 0.003 | 0.965 ± 0.002 | 0.966 ± 0.003 | 0.970 ± 0.005 | **0.977 ± 0.003** | 0.975 ± 0.003 |
| $datasets_{a}ll/cleveland-0_{v}s_{4}.dat$ | 0.911 ± 0.026 | 0.913 ± 0.016 | 0.913 ± 0.019 | **0.923 ± 0.028** | **0.923 ± 0.028** | 0.920 ± 0.029 | 0.893 ± 0.017 | 0.898 ± 0.017 | 0.905 ± 0.021 | 0.922 ± 0.024 | 0.922 ± 0.022 |
| $datasets_{a}ll/ecoli-0-1_{v}s_{2}-3-5.dat$ | 0.933 ± 0.021 | 0.932 ± 0.022 | 0.937 ± 0.022 | 0.935 ± 0.016 | 0.935 ± 0.016 | 0.935 ± 0.016 | 0.908 ± 0.026 | 0.897 ± 0.022 | 0.935 ± 0.011 | **0.949 ± 0.008** | 0.944 ± 0.014 |
| $datasets_{a}ll/yeast-1_{v}s_{7}.dat$ | 0.914 ± 0.010 | 0.915 ± 0.010 | **0.920 ± 0.012** | 0.918 ± 0.009 | 0.918 ± 0.009 | 0.913 ± 0.010 | 0.906 ± 0.007 | 0.903 ± 0.006 | 0.910 ± 0.007 | 0.919 ± 0.008 | 0.916 ± 0.010 |
| $datasets_{a}ll/abalone-21_{v}s_{8}.dat$ | 0.974 ± 0.004 | 0.974 ± 0.004 | 0.974 ± 0.004 | 0.972 ± 0.006 | 0.972 ± 0.006 | 0.972 ± 0.006 | 0.971 ± 0.006 | 0.968 ± 0.005 | 0.970 ± 0.005 | 0.977 ± 0.007 | **0.977 ± 0.006** |
| $datasets_{a}ll/abalone19.dat$ | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.000 | 0.988 ± 0.000 | 0.988 ± 0.000 | 0.988 ± 0.000 | **0.989 ± 0.000** | 0.984 ± 0.002 | 0.988 ± 0.000 | 0.988 ± 0.000 |
| $datasets_{a}ll/poker-9_{v}s_{7}.dat$ | 0.963 ± 0.017 | 0.962 ± 0.017 | 0.962 ± 0.017 | 0.951 ± 0.000 | 0.953 ± 0.005 | 0.953 ± 0.005 | 0.958 ± 0.009 | 0.952 ± 0.003 | 0.960 ± 0.014 | **0.969 ± 0.013** | 0.953 ± 0.005 |
| $datasets_{a}ll/ecoli3.dat$ | 0.906 ± 0.013 | 0.900 ± 0.018 | 0.902 ± 0.011 | 0.904 ± 0.019 | 0.904 ± 0.019 | **0.907 ± 0.018** | 0.853 ± 0.016 | 0.860 ± 0.016 | 0.902 ± 0.018 | 0.906 ± 0.019 | 0.904 ± 0.018 |
| $datasets_{a}ll/abalone-17_{v}s_{7}-8-9-10.dat$ | 0.967 ± 0.003 | 0.967 ± 0.003 | 0.967 ± 0.002 | 0.966 ± 0.003 | 0.966 ± 0.003 | 0.966 ± 0.002 | 0.963 ± 0.001 | 0.963 ± 0.001 | 0.962 ± 0.003 | **0.967 ± 0.002** | 0.967 ± 0.002 |
| $datasets_{a}ll/glass-0-1-6_{v}s_{5}.dat$ | 0.957 ± 0.015 | 0.961 ± 0.019 | 0.961 ± 0.019 | 0.948 ± 0.016 | 0.948 ± 0.016 | 0.948 ± 0.016 | 0.954 ± 0.024 | 0.937 ± 0.020 | **0.965 ± 0.023** | 0.961 ± 0.017 | 0.951 ± 0.019 |
| $datasets_{a}ll/ecoli-0-1-3-7_{v}s_{2}-6.dat$ | 0.969 ± 0.011 | 0.969 ± 0.011 | 0.969 ± 0.011 | 0.968 ± 0.011 | 0.968 ± 0.011 | 0.968 ± 0.011 | 0.963 ± 0.005 | 0.963 ± 0.005 | 0.969 ± 0.009 | **0.973 ± 0.012** | 0.963 ± 0.005 |
| $datasets_{a}ll/yeast-0-2-5-6_{v}s_{3}-7-8-9.dat$ | 0.908 ± 0.013 | 0.908 ± 0.012 | 0.910 ± 0.013 | 0.905 ± 0.014 | 0.905 ± 0.014 | 0.907 ± 0.012 | 0.869 ± 0.013 | 0.867 ± 0.009 | 0.897 ± 0.009 | 0.917 ± 0.010 | **0.918 ± 0.006** |
| $datasets_{a}ll/yeast5.dat$ | 0.976 ± 0.005 | 0.977 ± 0.004 | 0.977 ± 0.005 | 0.971 ± 0.005 | 0.971 ± 0.005 | 0.971 ± 0.005 | 0.957 ± 0.002 | 0.957 ± 0.002 | 0.976 ± 0.006 | **0.979 ± 0.005** | 0.974 ± 0.002 |
| $datasets_{a}ll/glass-0-1-4-6_{v}s_{2}.dat$ | 0.873 ± 0.017 | 0.872 ± 0.016 | 0.871 ± 0.014 | **0.879 ± 0.007** | **0.879 ± 0.007** | 0.877 ± 0.008 | 0.877 ± 0.012 | 0.876 ± 0.007 | 0.852 ± 0.022 | 0.872 ± 0.017 | 0.878 ± 0.013 |
| $datasets_{a}ll/yeast-0-5-6-7-9_{v}s_{4}.dat$ | 0.893 ± 0.014 | 0.892 ± 0.013 | 0.893 ± 0.010 | 0.882 ± 0.009 | 0.882 ± 0.009 | 0.882 ± 0.009 | 0.857 ± 0.005 | 0.858 ± 0.004 | 0.885 ± 0.022 | 0.894 ± 0.011 | **0.896 ± 0.015** |
| $datasets_{a}ll/yeast3.dat$ | 0.936 ± 0.005 | 0.934 ± 0.009 | 0.936 ± 0.006 | 0.927 ± 0.010 | 0.927 ± 0.010 | 0.930 ± 0.010 | 0.840 ± 0.003 | 0.840 ± 0.004 | 0.933 ± 0.007 | 0.940 ± 0.008 | **0.940 ± 0.009** |
| $datasets_{a}ll/kr-vs-k-zero_{v}s_{e}ight.dat$ | 0.991 ± 0.006 | 0.992 ± 0.007 | 0.992 ± 0.007 | 0.993 ± 0.004 | 0.995 ± 0.004 | 0.995 ± 0.004 | 0.972 ± 0.001 | 0.972 ± 0.001 | 0.996 ± 0.003 | **0.997 ± 0.003** | 0.995 ± 0.003 |
| $datasets_{a}ll/ecoli-0-6-7_{v}s_{3}-5.dat$ | 0.932 ± 0.018 | 0.932 ± 0.020 | 0.932 ± 0.020 | 0.899 ± 0.021 | 0.899 ± 0.021 | 0.900 ± 0.021 | 0.870 ± 0.021 | 0.868 ± 0.017 | 0.937 ± 0.021 | 0.948 ± 0.017 | **0.955 ± 0.011** |
| $datasets_{a}ll/kddcup-rootkit-imap_{v}s_{b}ack.dat$ | 1.000 ± 0.001 | 1.000 ± 0.001 | 1.000 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.998 ± 0.002 | **1.000 ± 0.000** | 1.000 ± 0.000 | 0.999 ± 0.001 |
| $datasets_{a}ll/winequality-red-8_{v}s_{6}.dat$ | 0.962 ± 0.004 | 0.962 ± 0.004 | 0.963 ± 0.003 | 0.963 ± 0.004 | 0.963 ± 0.004 | 0.963 ± 0.004 | **0.964 ± 0.003** | 0.960 ± 0.003 | 0.950 ± 0.009 | 0.962 ± 0.004 | 0.962 ± 0.004 |
| $datasets_{a}ll/flare-F.dat$ | 0.940 ± 0.003 | 0.940 ± 0.003 | 0.940 ± 0.003 | 0.940 ± 0.005 | 0.939 ± 0.003 | 0.940 ± 0.004 | 0.940 ± 0.002 | 0.940 ± 0.001 | 0.936 ± 0.006 | **0.941 ± 0.003** | 0.939 ± 0.006 |
| $datasets_{a}ll/glass4.dat$ | 0.941 ± 0.019 | 0.941 ± 0.025 | 0.945 ± 0.024 | 0.929 ± 0.019 | 0.929 ± 0.019 | 0.929 ± 0.019 | 0.932 ± 0.020 | 0.935 ± 0.019 | 0.946 ± 0.024 | **0.948 ± 0.019** | 0.943 ± 0.016 |
| $datasets_{a}ll/haberman.dat$ | 0.665 ± 0.027 | 0.664 ± 0.030 | 0.663 ± 0.030 | 0.666 ± 0.035 | **0.670 ± 0.030** | 0.661 ± 0.036 | 0.648 ± 0.033 | 0.641 ± 0.020 | 0.655 ± 0.027 | 0.664 ± 0.033 | 0.658 ± 0.033 |
| $datasets_{a}ll/poker-8-9_{v}s_{6}.dat$ | **0.978 ± 0.005** | 0.977 ± 0.003 | 0.978 ± 0.004 | 0.977 ± 0.003 | 0.977 ± 0.003 | 0.977 ± 0.003 | 0.975 ± 0.001 | 0.975 ± 0.001 | 0.970 ± 0.005 | 0.978 ± 0.004 | 0.976 ± 0.002 |
| $datasets_{a}ll/yeast-1-4-5-8_{v}s_{7}.dat$ | 0.934 ± 0.002 | 0.934 ± 0.002 | 0.933 ± 0.004 | 0.935 ± 0.002 | 0.935 ± 0.002 | 0.935 ± 0.002 | 0.935 ± 0.000 | 0.935 ± 0.000 | 0.917 ± 0.008 | 0.934 ± 0.004 | **0.936 ± 0.003** |
| $datasets_{a}ll/ecoli-0-2-6-7_{v}s_{3}-5.dat$ | 0.917 ± 0.038 | 0.912 ± 0.041 | 0.916 ± 0.036 | 0.908 ± 0.032 | 0.908 ± 0.032 | 0.908 ± 0.032 | 0.876 ± 0.034 | 0.877 ± 0.023 | 0.930 ± 0.014 | 0.941 ± 0.017 | **0.945 ± 0.012** |
| $datasets_{a}ll/glass-0-1-6_{v}s_{2}.dat$ | **0.881 ± 0.016** | 0.875 ± 0.017 | 0.876 ± 0.018 | 0.876 ± 0.015 | 0.876 ± 0.015 | 0.873 ± 0.013 | 0.867 ± 0.012 | 0.875 ± 0.015 | 0.854 ± 0.023 | 0.878 ± 0.024 | 0.873 ± 0.010 |
| $datasets_{a}ll/yeast4.dat$ | 0.952 ± 0.005 | 0.952 ± 0.003 | 0.953 ± 0.005 | 0.954 ± 0.003 | 0.954 ± 0.003 | 0.954 ± 0.003 | 0.950 ± 0.002 | 0.949 ± 0.001 | 0.948 ± 0.004 | **0.956 ± 0.005** | 0.954 ± 0.003 |
| $datasets_{a}ll/page-blocks0.dat$ | 0.970 ± 0.003 | 0.969 ± 0.003 | 0.969 ± 0.003 | 0.968 ± 0.003 | 0.968 ± 0.003 | 0.967 ± 0.004 | 0.961 ± 0.005 | 0.961 ± 0.005 | 0.965 ± 0.003 | **0.971 ± 0.002** | 0.971 ± 0.002 |
| $datasets_{a}ll/ecoli-0-1-4-7_{v}s_{2}-3-5-6.dat$ | 0.942 ± 0.018 | 0.935 ± 0.015 | 0.940 ± 0.014 | 0.928 ± 0.019 | 0.928 ± 0.019 | 0.925 ± 0.017 | 0.893 ± 0.011 | 0.900 ± 0.020 | 0.938 ± 0.018 | **0.949 ± 0.011** | 0.945 ± 0.010 |
| $datasets_{a}ll/poker-8_{v}s_{6}.dat$ | 0.983 ± 0.003 | **0.984 ± 0.003** | **0.984 ± 0.003** | 0.983 ± 0.001 | 0.983 ± 0.001 | 0.983 ± 0.001 | 0.983 ± 0.001 | 0.983 ± 0.001 | 0.979 ± 0.006 | 0.983 ± 0.002 | 0.983 ± 0.001 |
| $datasets_{a}ll/ecoli1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/glass0.dat$ | 0.833 ± 0.030 | **0.837 ± 0.020** | 0.833 ± 0.035 | 0.833 ± 0.028 | 0.833 ± 0.028 | 0.829 ± 0.029 | 0.825 ± 0.028 | 0.783 ± 0.047 | 0.783 ± 0.029 | 0.821 ± 0.030 | 0.804 ± 0.048 |
| $datasets_{a}ll/winequality-red-4.dat$ | 0.950 ± 0.003 | 0.949 ± 0.001 | 0.949 ± 0.002 | **0.951 ± 0.002** | **0.951 ± 0.002** | 0.950 ± 0.002 | 0.951 ± 0.001 | 0.950 ± 0.001 | 0.938 ± 0.007 | 0.949 ± 0.003 | 0.951 ± 0.002 |
| $datasets_{a}ll/pima.dat$ | 0.703 ± 0.022 | 0.711 ± 0.027 | 0.700 ± 0.020 | 0.708 ± 0.026 | 0.718 ± 0.010 | 0.703 ± 0.017 | 0.640 ± 0.027 | 0.643 ± 0.031 | 0.683 ± 0.017 | **0.728 ± 0.014** | 0.721 ± 0.021 |
| $datasets_{a}ll/abalone-19_{v}s_{1}0-11-12-13.dat$ | 0.970 ± 0.002 | 0.970 ± 0.002 | **0.971 ± 0.002** | 0.970 ± 0.001 | 0.970 ± 0.001 | 0.970 ± 0.001 | 0.970 ± 0.000 | 0.971 ± 0.000 | 0.961 ± 0.004 | 0.970 ± 0.001 | 0.970 ± 0.001 |
| $datasets_{a}ll/ecoli2.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/abalone9-18.dat$ | **0.935 ± 0.010** | 0.934 ± 0.008 | 0.933 ± 0.009 | 0.924 ± 0.005 | 0.924 ± 0.005 | 0.923 ± 0.005 | 0.914 ± 0.002 | 0.917 ± 0.006 | 0.918 ± 0.009 | 0.930 ± 0.010 | 0.925 ± 0.009 |
| $datasets_{a}ll/yeast-1-2-8-9_{v}s_{7}.dat$ | **0.956 ± 0.005** | 0.955 ± 0.005 | 0.955 ± 0.004 | 0.954 ± 0.004 | 0.954 ± 0.004 | 0.954 ± 0.004 | 0.954 ± 0.002 | 0.953 ± 0.000 | 0.944 ± 0.012 | 0.955 ± 0.004 | 0.955 ± 0.004 |
| $datasets_{a}ll/winequality-white-3_{v}s_{7}.dat$ | 0.972 ± 0.006 | 0.973 ± 0.005 | 0.973 ± 0.004 | 0.972 ± 0.004 | 0.972 ± 0.004 | 0.972 ± 0.004 | 0.969 ± 0.002 | 0.969 ± 0.004 | 0.972 ± 0.009 | **0.975 ± 0.005** | 0.972 ± 0.004 |
| $datasets_{a}ll/yeast-2_{v}s_{4}.dat$ | 0.937 ± 0.011 | 0.942 ± 0.012 | 0.939 ± 0.011 | 0.945 ± 0.012 | 0.945 ± 0.012 | 0.945 ± 0.012 | 0.894 ± 0.017 | 0.899 ± 0.023 | 0.941 ± 0.011 | 0.947 ± 0.005 | **0.950 ± 0.009** |
| $datasets_{a}ll/winequality-red-3_{v}s_{5}.dat$ | 0.977 ± 0.002 | 0.977 ± 0.002 | 0.977 ± 0.002 | 0.978 ± 0.001 | 0.978 ± 0.001 | 0.978 ± 0.001 | 0.978 ± 0.000 | **0.978 ± 0.000** | 0.973 ± 0.003 | 0.977 ± 0.002 | **0.978 ± 0.000** |
| $datasets_{a}ll/glass2.dat$ | 0.886 ± 0.024 | 0.889 ± 0.016 | 0.886 ± 0.015 | 0.888 ± 0.015 | 0.888 ± 0.015 | 0.888 ± 0.015 | 0.887 ± 0.016 | 0.884 ± 0.010 | 0.876 ± 0.024 | **0.892 ± 0.023** | 0.888 ± 0.020 |
| $datasets_{a}ll/yeast-2_{v}s_{8}.dat$ | **0.969 ± 0.010** | 0.964 ± 0.014 | 0.964 ± 0.014 | 0.945 ± 0.013 | 0.945 ± 0.013 | 0.945 ± 0.013 | 0.939 ± 0.003 | 0.939 ± 0.003 | 0.954 ± 0.010 | 0.964 ± 0.010 | 0.955 ± 0.013 |
| $datasets_{a}ll/glass1.dat$ | 0.783 ± 0.052 | 0.784 ± 0.038 | 0.777 ± 0.041 | 0.767 ± 0.024 | 0.767 ± 0.024 | 0.759 ± 0.028 | 0.770 ± 0.046 | 0.752 ± 0.030 | 0.732 ± 0.026 | 0.779 ± 0.046 | **0.784 ± 0.052** |
| $datasets_{a}ll/zoo-3.dat$ | 0.940 ± 0.025 | 0.936 ± 0.026 | 0.936 ± 0.026 | 0.933 ± 0.026 | 0.933 ± 0.026 | 0.933 ± 0.026 | 0.927 ± 0.014 | 0.927 ± 0.014 | 0.922 ± 0.023 | 0.940 ± 0.024 | **0.944 ± 0.025** |
| $datasets_{a}ll/glass-0-1-5_{v}s_{2}.dat$ | 0.871 ± 0.022 | 0.857 ± 0.021 | 0.862 ± 0.022 | 0.851 ± 0.011 | 0.851 ± 0.011 | 0.851 ± 0.011 | 0.859 ± 0.015 | 0.858 ± 0.014 | 0.851 ± 0.027 | **0.875 ± 0.021** | 0.858 ± 0.010 |
| $datasets_{a}ll/abalone-20_{v}s_{8}-9-10.dat$ | 0.981 ± 0.001 | 0.981 ± 0.002 | 0.981 ± 0.002 | 0.980 ± 0.001 | 0.980 ± 0.001 | 0.980 ± 0.001 | 0.980 ± 0.001 | 0.980 ± 0.000 | 0.978 ± 0.002 | **0.981 ± 0.003** | 0.981 ± 0.001 |
| $datasets_{a}ll/kddcup-buffer_{o}verflow_{v}s_{b}ack.dat$ | 1.000 ± 0.001 | 1.000 ± 0.001 | 1.000 ± 0.001 | 0.998 ± 0.002 | 0.998 ± 0.002 | 0.998 ± 0.002 | 0.998 ± 0.002 | 0.997 ± 0.001 | **1.000 ± 0.000** | **1.000 ± 0.000** | 1.000 ± 0.001 |
| $datasets_{a}ll/winequality-white-3-9_{v}s_{5}.dat$ | 0.974 ± 0.001 | 0.974 ± 0.002 | 0.974 ± 0.002 | 0.975 ± 0.002 | 0.975 ± 0.002 | 0.974 ± 0.001 | 0.975 ± 0.001 | 0.975 ± 0.001 | 0.973 ± 0.003 | **0.977 ± 0.004** | 0.975 ± 0.002 |
| $datasets_{a}ll/vehicle3.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/vehicle1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/page-blocks-1-3_{v}s_{4}.dat$ | 0.986 ± 0.010 | 0.988 ± 0.010 | 0.988 ± 0.010 | 0.986 ± 0.009 | 0.986 ± 0.009 | 0.986 ± 0.009 | 0.983 ± 0.008 | 0.982 ± 0.007 | 0.984 ± 0.011 | **0.989 ± 0.005** | 0.986 ± 0.009 |
| $datasets_{a}ll/ecoli-0-6-7_{v}s_{5}.dat$ | 0.929 ± 0.039 | 0.921 ± 0.047 | 0.921 ± 0.047 | 0.927 ± 0.023 | 0.927 ± 0.023 | 0.927 ± 0.023 | 0.889 ± 0.018 | 0.898 ± 0.020 | 0.949 ± 0.020 | **0.953 ± 0.022** | 0.951 ± 0.021 |
| $datasets_{a}ll/poker-8-9_{v}s_{5}.dat$ | 0.982 ± 0.001 | 0.982 ± 0.001 | 0.982 ± 0.001 | **0.982 ± 0.001** | 0.982 ± 0.001 | 0.982 ± 0.001 | 0.982 ± 0.001 | 0.982 ± 0.001 | 0.977 ± 0.003 | 0.982 ± 0.001 | 0.982 ± 0.001 |
| $datasets_{a}ll/yeast-0-3-5-9_{v}s_{7}-8.dat$ | **0.882 ± 0.010** | 0.880 ± 0.012 | 0.881 ± 0.009 | 0.870 ± 0.011 | 0.870 ± 0.011 | 0.872 ± 0.009 | 0.857 ± 0.006 | 0.857 ± 0.005 | 0.858 ± 0.015 | 0.876 ± 0.007 | 0.879 ± 0.013 |

## **Table 3.** Gmean

| Dataset name | DE-Forest-gm | DE-Forest-AUC | DE-Forest-bac | DE-Forest-gm-b | DE-Forest-AUC-b | DE-Forest-bac-b | RandomFS | RandomFS-b | DT | RF | RF-b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $datasets_all/glass5.dat$ | 0.606 ± 0.302 | 0.530 ± 0.239 | 0.545 ± 0.255 | 0.233 ± 0.096 | 0.233 ± 0.096 | 0.233 ± 0.096 | 0.434 ± 0.206 | 0.325 ± 0.256 | **0.690 ± 0.284** | 0.625 ± 0.192 | 0.514 ± 0.187 |
| $datasets_all/winequality-white-9_vs_4.dat$ | 0.265 ± 0.196 | 0.265 ± 0.196 | 0.265 ± 0.196 | 0.321 ± 0.231 | 0.321 ± 0.231 | 0.321 ± 0.231 | 0.168 ± 0.017 | 0.169 ± 0.017 | **0.356 ± 0.238** | 0.280 ± 0.215 | 0.210 ± 0.128 |
| $datasets_all/winequality-red-8_vs_6-7.dat$ | 0.369 ± 0.038 | 0.369 ± 0.038 | 0.369 ± 0.038 | 0.357 ± 0.000 | 0.357 ± 0.000 | 0.357 ± 0.000 | 0.357 ± 0.000 | 0.336 ± 0.064 | **0.386 ± 0.073** | 0.356 ± 0.001 | 0.271 ± 0.104 |
| $datasets_all/yeast1.dat$ | 0.614 ± 0.021 | 0.615 ± 0.011 | 0.608 ± 0.015 | 0.581 ± 0.010 | 0.582 ± 0.011 | 0.581 ± 0.014 | 0.472 ± 0.020 | 0.479 ± 0.020 | 0.631 ± 0.013 | **0.649 ± 0.009** | 0.635 ± 0.017 |
| $datasets_all/yeast6.dat$ | 0.469 ± 0.100 | 0.507 ± 0.078 | 0.459 ± 0.091 | 0.420 ± 0.103 | 0.420 ± 0.103 | 0.427 ± 0.101 | 0.165 ± 0.039 | 0.199 ± 0.075 | **0.678 ± 0.077** | 0.589 ± 0.062 | 0.497 ± 0.070 |
| $datasets_all/cleveland-0_vs_4.dat$ | 0.479 ± 0.166 | 0.464 ± 0.124 | 0.459 ± 0.142 | 0.520 ± 0.185 | 0.520 ± 0.185 | 0.499 ± 0.201 | 0.320 ± 0.086 | 0.342 ± 0.094 | **0.585 ± 0.096** | 0.526 ± 0.186 | 0.502 ± 0.166 |
| $datasets_all/ecoli-0-1_vs_2-3-5.dat$ | 0.723 ± 0.094 | 0.722 ± 0.095 | 0.744 ± 0.085 | 0.718 ± 0.097 | 0.718 ± 0.097 | 0.718 ± 0.097 | 0.563 ± 0.119 | 0.503 ± 0.109 | **0.795 ± 0.069** | 0.791 ± 0.067 | 0.753 ± 0.072 |
| $datasets_all/yeast-1_vs_7.dat$ | 0.412 ± 0.080 | 0.401 ± 0.101 | 0.466 ± 0.111 | 0.415 ± 0.077 | 0.415 ± 0.077 | 0.359 ± 0.089 | 0.275 ± 0.058 | 0.266 ± 0.040 | **0.601 ± 0.079** | 0.449 ± 0.068 | 0.402 ± 0.068 |
| $datasets_all/abalone-21_vs_8.dat$ | 0.593 ± 0.110 | 0.593 ± 0.110 | 0.593 ± 0.110 | 0.441 ± 0.184 | 0.441 ± 0.184 | 0.441 ± 0.184 | 0.381 ± 0.170 | 0.306 ± 0.160 | 0.575 ± 0.132 | 0.610 ± 0.142 | **0.640 ± 0.156** |
| $datasets_all/abalone19.dat$ | 0.087 ± 0.000 | 0.105 ± 0.053 | 0.105 ± 0.053 | 0.087 ± 0.000 | 0.087 ± 0.000 | 0.087 ± 0.000 | 0.087 ± 0.000 | 0.087 ± 0.000 | **0.157 ± 0.086** | 0.105 ± 0.053 | 0.087 ± 0.000 |
| $datasets_all/poker-9_vs_7.dat$ | 0.425 ± 0.255 | 0.425 ± 0.255 | 0.425 ± 0.255 | 0.178 ± 0.000 | 0.212 ± 0.102 | 0.212 ± 0.102 | 0.314 ± 0.166 | 0.212 ± 0.101 | **0.524 ± 0.248** | 0.513 ± 0.232 | 0.212 ± 0.102 |
| $datasets_all/ecoli3.dat$ | 0.634 ± 0.079 | 0.639 ± 0.095 | 0.640 ± 0.067 | 0.622 ± 0.086 | 0.622 ± 0.086 | 0.631 ± 0.081 | 0.352 ± 0.072 | 0.377 ± 0.084 | **0.686 ± 0.069** | 0.672 ± 0.082 | 0.636 ± 0.091 |
| $datasets_all/abalone-17_vs_7-8-9-10.dat$ | 0.391 ± 0.095 | 0.376 ± 0.082 | 0.394 ± 0.082 | 0.291 ± 0.092 | 0.291 ± 0.092 | 0.303 ± 0.088 | 0.175 ± 0.058 | 0.180 ± 0.038 | **0.503 ± 0.078** | 0.382 ± 0.049 | 0.337 ± 0.074 |
| $datasets_all/glass-0-1-6_vs_5.dat$ | 0.696 ± 0.122 | 0.680 ± 0.206 | 0.680 ± 0.206 | 0.474 ± 0.154 | 0.474 ± 0.154 | 0.474 ± 0.154 | 0.555 ± 0.263 | 0.343 ± 0.202 | **0.824 ± 0.135** | 0.667 ± 0.202 | 0.522 ± 0.235 |
| $datasets_all/ecoli-0-1-3-7_vs_2-6.dat$ | 0.345 ± 0.240 | 0.345 ± 0.240 | 0.345 ± 0.240 | 0.302 ± 0.232 | 0.302 ± 0.232 | 0.302 ± 0.232 | 0.199 ± 0.127 | 0.155 ± 0.011 | **0.663 ± 0.280** | 0.454 ± 0.257 | 0.155 ± 0.011 |
| $datasets_all/yeast-0-2-5-6_vs_3-7-8-9.dat$ | 0.625 ± 0.054 | 0.626 ± 0.053 | 0.634 ± 0.053 | 0.580 ± 0.074 | 0.580 ± 0.074 | 0.602 ± 0.056 | 0.381 ± 0.074 | 0.371 ± 0.053 | **0.697 ± 0.037** | 0.659 ± 0.048 | 0.654 ± 0.025 |
| $datasets_all/yeast5.dat$ | 0.677 ± 0.081 | 0.686 ± 0.059 | 0.689 ± 0.060 | 0.559 ± 0.095 | 0.559 ± 0.095 | 0.559 ± 0.095 | 0.226 ± 0.060 | 0.216 ± 0.060 | **0.772 ± 0.098** | 0.716 ± 0.077 | 0.631 ± 0.041 |
| $datasets_all/glass-0-1-4-6_vs_2.dat$ | 0.392 ± 0.113 | 0.352 ± 0.117 | 0.352 ± 0.116 | 0.289 ± 0.043 | 0.289 ± 0.043 | 0.288 ± 0.044 | 0.302 ± 0.059 | 0.275 ± 0.007 | **0.427 ± 0.107** | 0.353 ± 0.070 | 0.302 ± 0.060 |
| $datasets_all/yeast-0-5-6-7-9_vs_4.dat$ | 0.531 ± 0.074 | 0.545 ± 0.085 | 0.546 ± 0.055 | 0.448 ± 0.046 | 0.448 ± 0.046 | 0.448 ± 0.046 | 0.300 ± 0.015 | 0.305 ± 0.019 | **0.633 ± 0.051** | 0.544 ± 0.058 | 0.530 ± 0.086 |
| $datasets_all/yeast3.dat$ | 0.804 ± 0.032 | 0.793 ± 0.032 | 0.799 ± 0.035 | 0.732 ± 0.053 | 0.732 ± 0.053 | 0.743 ± 0.052 | 0.319 ± 0.014 | 0.323 ± 0.021 | **0.829 ± 0.031** | 0.801 ± 0.039 | 0.794 ± 0.045 |
| $datasets_all/kr-vs-k-zero_vs_eight.dat$ | 0.788 ± 0.164 | 0.808 ± 0.175 | 0.808 ± 0.175 | 0.828 ± 0.105 | 0.860 ± 0.100 | 0.860 ± 0.100 | 0.135 ± 0.002 | 0.135 ± 0.002 | 0.950 ± 0.061 | **0.957 ± 0.048** | 0.908 ± 0.066 |
| $datasets_all/ecoli-0-6-7_vs_3-5.dat$ | 0.749 ± 0.084 | 0.742 ± 0.101 | 0.742 ± 0.101 | 0.535 ± 0.099 | 0.535 ± 0.099 | 0.535 ± 0.099 | 0.390 ± 0.109 | 0.403 ± 0.085 | **0.813 ± 0.074** | 0.802 ± 0.069 | 0.811 ± 0.045 |
| $datasets_all/kddcup-rootkit-imap_vs_back.dat$ | 0.990 ± 0.029 | 0.990 ± 0.029 | 0.990 ± 0.029 | 0.933 ± 0.052 | 0.933 ± 0.052 | 0.933 ± 0.052 | 0.952 ± 0.059 | 0.894 ± 0.106 | **1.000 ± 0.000** | 0.977 ± 0.023 | 0.963 ± 0.028 |
| $datasets_all/winequality-red-8_vs_6.dat$ | 0.355 ± 0.073 | 0.392 ± 0.091 | 0.393 ± 0.090 | 0.347 ± 0.104 | 0.347 ± 0.104 | 0.348 ± 0.104 | 0.323 ± 0.080 | 0.223 ± 0.092 | **0.479 ± 0.142** | 0.367 ± 0.084 | 0.283 ± 0.098 |
| $datasets_all/flare-F.dat$ | 0.290 ± 0.070 | 0.308 ± 0.084 | 0.295 ± 0.077 | 0.337 ± 0.099 | 0.301 ± 0.083 | 0.305 ± 0.116 | 0.206 ± 0.027 | 0.197 ± 0.002 | **0.428 ± 0.069** | 0.422 ± 0.060 | 0.391 ± 0.059 |
| $datasets_all/glass4.dat$ | 0.612 ± 0.164 | 0.638 ± 0.187 | 0.640 ± 0.188 | 0.475 ± 0.149 | 0.475 ± 0.149 | 0.475 ± 0.149 | 0.523 ± 0.148 | 0.509 ± 0.133 | **0.783 ± 0.090** | 0.660 ± 0.114 | 0.595 ± 0.096 |
| $datasets_all/haberman.dat$ | 0.547 ± 0.034 | 0.540 ± 0.048 | 0.538 ± 0.048 | 0.523 ± 0.049 | 0.529 ± 0.045 | 0.516 ± 0.045 | 0.475 ± 0.044 | 0.465 ± 0.029 | **0.554 ± 0.044** | 0.536 ± 0.044 | 0.514 ± 0.049 |
| $datasets_all/poker-8-9_vs_6.dat$ | 0.289 ± 0.182 | 0.239 ± 0.148 | 0.268 ± 0.152 | 0.242 ± 0.118 | 0.242 ± 0.118 | 0.242 ± 0.118 | 0.129 ± 0.002 | 0.129 ± 0.002 | **0.377 ± 0.166** | 0.275 ± 0.163 | 0.200 ± 0.087 |
| $datasets_all/yeast-1-4-5-8_vs_7.dat$ | 0.203 ± 0.001 | 0.203 ± 0.001 | 0.214 ± 0.035 | 0.226 ± 0.046 | 0.226 ± 0.046 | 0.226 ± 0.046 | 0.203 ± 0.000 | 0.203 ± 0.000 | **0.331 ± 0.061** | 0.226 ± 0.047 | 0.238 ± 0.054 |
| $datasets_all/ecoli-0-2-6-7_vs_3-5.dat$ | 0.653 ± 0.206 | 0.631 ± 0.215 | 0.648 ± 0.202 | 0.591 ± 0.158 | 0.591 ± 0.158 | 0.591 ± 0.158 | 0.440 ± 0.176 | 0.419 ± 0.108 | **0.779 ± 0.082** | 0.772 ± 0.088 | 0.752 ± 0.058 |
| $datasets_all/glass-0-1-6_vs_2.dat$ | 0.402 ± 0.088 | 0.365 ± 0.085 | 0.365 ± 0.086 | 0.327 ± 0.065 | 0.327 ± 0.065 | 0.312 ± 0.057 | 0.320 ± 0.066 | 0.326 ± 0.066 | **0.479 ± 0.078** | 0.439 ± 0.117 | 0.324 ± 0.065 |
| $datasets_all/yeast4.dat$ | 0.385 ± 0.123 | 0.381 ± 0.104 | 0.380 ± 0.108 | 0.339 ± 0.075 | 0.343 ± 0.078 | 0.322 ± 0.077 | 0.219 ± 0.059 | 0.182 ± 0.002 | **0.517 ± 0.083** | 0.422 ± 0.090 | 0.353 ± 0.061 |
| $datasets_all/page-blocks0.dat$ | 0.896 ± 0.016 | 0.895 ± 0.018 | 0.893 ± 0.015 | 0.882 ± 0.014 | 0.882 ± 0.014 | 0.879 ± 0.024 | 0.847 ± 0.021 | 0.848 ± 0.025 | 0.901 ± 0.017 | **0.906 ± 0.016** | 0.903 ± 0.012 |
| $datasets_all/ecoli-0-1-4-7_vs_2-3-5-6.dat$ | 0.731 ± 0.095 | 0.682 ± 0.094 | 0.714 ± 0.080 | 0.621 ± 0.125 | 0.621 ± 0.125 | 0.604 ± 0.113 | 0.419 ± 0.057 | 0.457 ± 0.112 | **0.822 ± 0.060** | 0.763 ± 0.061 | 0.718 ± 0.062 |
| $datasets_all/poker-8_vs_6.dat$ | 0.158 ± 0.153 | 0.184 ± 0.163 | 0.184 ± 0.163 | 0.107 ± 0.003 | 0.107 ± 0.003 | 0.107 ± 0.003 | 0.107 ± 0.003 | 0.107 ± 0.003 | **0.208 ± 0.232** | 0.147 ± 0.120 | 0.107 ± 0.003 |
| $datasets_all/ecoli1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/glass0.dat$ | **0.796 ± 0.044** | 0.795 ± 0.025 | 0.796 ± 0.048 | 0.791 ± 0.041 | 0.791 ± 0.041 | 0.783 ± 0.042 | 0.784 ± 0.033 | 0.728 ± 0.057 | 0.756 ± 0.040 | 0.783 ± 0.045 | 0.773 ± 0.066 |
| $datasets_all/winequality-red-4.dat$ | 0.215 ± 0.058 | 0.195 ± 0.032 | 0.195 ± 0.032 | 0.217 ± 0.050 | 0.217 ± 0.050 | 0.195 ± 0.032 | 0.187 ± 0.024 | 0.179 ± 0.002 | **0.333 ± 0.108** | 0.231 ± 0.057 | 0.212 ± 0.039 |
| $datasets_all/pima.dat$ | 0.655 ± 0.027 | 0.664 ± 0.031 | 0.653 ± 0.024 | 0.658 ± 0.031 | 0.670 ± 0.012 | 0.654 ± 0.021 | 0.578 ± 0.028 | 0.580 ± 0.033 | 0.653 ± 0.021 | **0.685 ± 0.017** | 0.676 ± 0.026 |
| $datasets_all/abalone-19_vs_10-11-12-13.dat$ | 0.153 ± 0.043 | 0.167 ± 0.057 | 0.167 ± 0.057 | 0.139 ± 0.000 | 0.139 ± 0.000 | 0.139 ± 0.000 | 0.139 ± 0.000 | 0.139 ± 0.000 | **0.233 ± 0.108** | 0.139 ± 0.000 | 0.153 ± 0.043 |
| $datasets_all/ecoli2.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/abalone9-18.dat$ | 0.508 ± 0.093 | 0.513 ± 0.086 | 0.490 ± 0.097 | 0.362 ± 0.059 | 0.362 ± 0.059 | 0.339 ± 0.052 | 0.240 ± 0.024 | 0.268 ± 0.057 | **0.554 ± 0.085** | 0.467 ± 0.100 | 0.377 ± 0.074 |
| $datasets_all/yeast-1-2-8-9_vs_7.dat$ | 0.322 ± 0.090 | 0.335 ± 0.108 | 0.304 ± 0.083 | 0.232 ± 0.090 | 0.245 ± 0.090 | 0.245 ± 0.090 | 0.201 ± 0.052 | 0.175 ± 0.000 | **0.481 ± 0.100** | 0.321 ± 0.090 | 0.265 ± 0.102 |
| $datasets_all/winequality-white-3_vs_7.dat$ | 0.393 ± 0.144 | 0.438 ± 0.108 | 0.433 ± 0.082 | 0.346 ± 0.130 | 0.346 ± 0.130 | 0.346 ± 0.130 | 0.226 ± 0.096 | 0.227 ± 0.134 | **0.511 ± 0.169** | 0.449 ± 0.148 | 0.358 ± 0.134 |
| $datasets_all/yeast-2_vs_4.dat$ | 0.746 ± 0.050 | 0.759 ± 0.060 | 0.745 ± 0.058 | 0.772 ± 0.060 | 0.772 ± 0.060 | 0.772 ± 0.060 | 0.496 ± 0.087 | 0.526 ± 0.108 | **0.820 ± 0.035** | 0.806 ± 0.027 | 0.805 ± 0.038 |
| $datasets_all/winequality-red-3_vs_5.dat$ | 0.119 ± 0.000 | 0.119 ± 0.000 | 0.119 ± 0.000 | 0.119 ± 0.000 | 0.119 ± 0.000 | 0.119 ± 0.000 | 0.119 ± 0.000 | 0.119 ± 0.000 | **0.269 ± 0.191** | 0.119 ± 0.000 | 0.119 ± 0.000 |
| $datasets_all/glass2.dat$ | 0.363 ± 0.090 | 0.372 ± 0.119 | 0.356 ± 0.122 | 0.313 ± 0.086 | 0.313 ± 0.086 | 0.313 ± 0.086 | 0.357 ± 0.114 | 0.298 ± 0.058 | **0.512 ± 0.137** | 0.439 ± 0.138 | 0.322 ± 0.113 |
| $datasets_all/yeast-2_vs_8.dat$ | 0.664 ± 0.144 | 0.600 ± 0.188 | 0.600 ± 0.188 | 0.310 ± 0.193 | 0.310 ± 0.193 | 0.310 ± 0.193 | 0.216 ± 0.049 | 0.216 ± 0.049 | **0.686 ± 0.127** | 0.613 ± 0.138 | 0.465 ± 0.196 |
| $datasets_all/glass1.dat$ | 0.746 ± 0.062 | **0.747 ± 0.041** | 0.738 ± 0.043 | 0.721 ± 0.027 | 0.721 ± 0.027 | 0.713 ± 0.031 | 0.727 ± 0.054 | 0.701 ± 0.034 | 0.712 ± 0.032 | 0.745 ± 0.051 | 0.745 ± 0.059 |
| $datasets_all/zoo-3.dat$ | 0.407 ± 0.228 | 0.370 ± 0.224 | 0.370 ± 0.224 | 0.319 ± 0.198 | 0.319 ± 0.198 | 0.319 ± 0.198 | 0.216 ± 0.020 | 0.216 ± 0.020 | **0.432 ± 0.222** | 0.391 ± 0.220 | 0.414 ± 0.248 |
| $datasets_all/glass-0-1-5_vs_2.dat$ | 0.426 ± 0.127 | 0.385 ± 0.129 | 0.400 ± 0.124 | 0.296 ± 0.008 | 0.296 ± 0.008 | 0.296 ± 0.008 | 0.357 ± 0.081 | 0.324 ± 0.055 | **0.498 ± 0.105** | 0.459 ± 0.100 | 0.322 ± 0.053 |
| $datasets_all/abalone-20_vs_8-9-10.dat$ | 0.247 ± 0.141 | 0.256 ± 0.122 | 0.228 ± 0.118 | 0.134 ± 0.054 | 0.134 ± 0.054 | 0.134 ± 0.054 | 0.134 ± 0.054 | 0.116 ± 0.000 | **0.415 ± 0.164** | 0.229 ± 0.145 | 0.206 ± 0.091 |
| $datasets_all/kddcup-buffer_overflow_vs_back.dat$ | 0.993 ± 0.021 | 0.993 ± 0.021 | 0.993 ± 0.021 | 0.941 ± 0.089 | 0.941 ± 0.089 | 0.941 ± 0.089 | 0.936 ± 0.070 | 0.901 ± 0.050 | **1.000 ± 0.000** | **1.000 ± 0.000** | 0.990 ± 0.016 |
| $datasets_all/winequality-white-3-9_vs_5.dat$ | 0.147 ± 0.055 | 0.176 ± 0.097 | 0.176 ± 0.097 | 0.147 ± 0.055 | 0.147 ± 0.055 | 0.129 ± 0.003 | 0.129 ± 0.003 | 0.129 ± 0.003 | **0.390 ± 0.132** | 0.298 ± 0.167 | 0.183 ± 0.082 |
| $datasets_all/vehicle3.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/vehicle1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/page-blocks-1-3_vs_4.dat$ | 0.919 ± 0.069 | 0.931 ± 0.058 | 0.931 ± 0.058 | 0.905 ± 0.051 | 0.905 ± 0.051 | 0.905 ± 0.051 | 0.885 ± 0.044 | 0.869 ± 0.064 | **0.934 ± 0.075** | 0.931 ± 0.044 | 0.900 ± 0.073 |
| $datasets_all/ecoli-0-6-7_vs_5.dat$ | 0.668 ± 0.220 | 0.644 ± 0.245 | 0.644 ± 0.245 | 0.637 ± 0.121 | 0.637 ± 0.121 | 0.637 ± 0.121 | 0.436 ± 0.103 | 0.481 ± 0.114 | **0.822 ± 0.080** | 0.807 ± 0.101 | 0.776 ± 0.128 |
| $datasets_all/poker-8-9_vs_5.dat$ | 0.109 ± 0.002 | 0.129 ± 0.058 | 0.129 ± 0.058 | 0.129 ± 0.059 | 0.109 ± 0.002 | 0.109 ± 0.002 | 0.109 ± 0.002 | 0.109 ± 0.002 | **0.405 ± 0.168** | 0.149 ± 0.078 | 0.109 ± 0.002 |
| $datasets_all/yeast-0-3-5-9_vs_7-8.dat$ | 0.473 ± 0.045 | 0.474 ± 0.059 | 0.472 ± 0.053 | 0.403 ± 0.068 | 0.403 ± 0.068 | 0.409 ± 0.054 | 0.313 ± 0.031 | 0.313 ± 0.031 | **0.567 ± 0.069** | 0.471 ± 0.030 | 0.469 ± 0.065 |

**Table 4.** Precision

| Dataset name | DE-Forest-gm | DE-Forest-AUC | DE-Forest-bac | DE-Forest-gm-b | DE-Forest-AUC-b | DE-Forest-bac-b | RandomFS | RandomFS-b | DT | RF | RF-b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $datasets_{a}ll/glass5.dat$ | 0.957 ± 0.030 | 0.952 ± 0.026 | 0.954 ± 0.027 | 0.922 ± 0.019 | 0.922 ± 0.019 | 0.922 ± 0.019 | 0.945 ± 0.027 | 0.932 ± 0.026 | 0.958 ± 0.026 | **0.965 ± 0.019** | 0.955 ± 0.020 |
| $datasets_{a}ll/winequality-white-9_{v}s_{4}.dat$ | 0.949 ± 0.020 | 0.949 ± 0.020 | 0.949 ± 0.020 | **0.953 ± 0.023** | **0.953 ± 0.023** | **0.953 ± 0.023** | 0.941 ± 0.011 | 0.941 ± 0.012 | 0.951 ± 0.016 | 0.947 ± 0.020 | 0.946 ± 0.015 |
| $datasets_{a}ll/winequality-red-8_{v}s_{6}-7.dat$ | 0.977 ± 0.007 | 0.972 ± 0.007 | 0.972 ± 0.007 | **0.981 ± 0.003** | **0.981 ± 0.003** | **0.981 ± 0.003** | 0.981 ± 0.003 | 0.979 ± 0.007 | 0.963 ± 0.002 | 0.972 ± 0.005 | 0.970 ± 0.010 |
| $datasets_{a}ll/yeast1.dat$ | 0.716 ± 0.019 | 0.720 ± 0.008 | 0.711 ± 0.014 | 0.701 ± 0.011 | 0.703 ± 0.013 | 0.703 ± 0.014 | 0.707 ± 0.091 | 0.698 ± 0.060 | 0.699 ± 0.010 | **0.743 ± 0.011** | 0.736 ± 0.014 |
| $datasets_{a}ll/yeast6.dat$ | 0.971 ± 0.005 | 0.973 ± 0.003 | 0.972 ± 0.003 | 0.971 ± 0.007 | 0.971 ± 0.007 | 0.972 ± 0.007 | 0.956 ± 0.008 | 0.961 ± 0.012 | 0.973 ± 0.004 | 0.978 ± 0.003 | **0.978 ± 0.005** |
| $datasets_{a}ll/cleveland-0_{v}s_{4}.dat$ | 0.903 ± 0.039 | 0.920 ± 0.030 | 0.912 ± 0.037 | 0.924 ± 0.041 | 0.924 ± 0.041 | 0.916 ± 0.044 | 0.874 ± 0.037 | 0.888 ± 0.045 | 0.906 ± 0.019 | 0.915 ± 0.042 | **0.927 ± 0.038** |
| $datasets_{a}ll/ecoli-0-1_{v}s_{2}-3-5.dat$ | 0.939 ± 0.022 | 0.936 ± 0.023 | 0.939 ± 0.024 | 0.944 ± 0.013 | 0.944 ± 0.013 | 0.944 ± 0.013 | 0.931 ± 0.019 | 0.909 ± 0.048 | 0.938 ± 0.013 | **0.953 ± 0.007** | 0.949 ± 0.011 |
| $datasets_{a}ll/yeast-1_{v}s_{7}.dat$ | 0.911 ± 0.021 | 0.911 ± 0.024 | 0.917 ± 0.021 | **0.920 ± 0.022** | **0.920 ± 0.022** | 0.912 ± 0.029 | 0.888 ± 0.029 | 0.884 ± 0.022 | 0.914 ± 0.008 | 0.917 ± 0.015 | 0.914 ± 0.018 |
| $datasets_{a}ll/abalone-21_{v}s_{8}.dat$ | 0.974 ± 0.007 | 0.974 ± 0.007 | 0.974 ± 0.007 | 0.972 ± 0.012 | 0.972 ± 0.012 | 0.972 ± 0.012 | 0.970 ± 0.013 | 0.964 ± 0.013 | 0.970 ± 0.006 | **0.979 ± 0.007** | 0.978 ± 0.007 |
| $datasets_{a}ll/abalone19.dat$ | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | 0.985 ± 0.000 | **0.985 ± 0.001** | 0.985 ± 0.000 |
| $datasets_{a}ll/poker-9_{v}s_{7}.dat$ | 0.959 ± 0.024 | 0.959 ± 0.024 | 0.959 ± 0.024 | 0.936 ± 0.000 | 0.940 ± 0.012 | 0.940 ± 0.012 | 0.952 ± 0.020 | 0.938 ± 0.007 | 0.957 ± 0.017 | **0.968 ± 0.021** | 0.940 ± 0.012 |
| $datasets_{a}ll/ecoli3.dat$ | **0.911 ± 0.015** | 0.905 ± 0.021 | 0.906 ± 0.013 | 0.906 ± 0.022 | 0.906 ± 0.022 | 0.910 ± 0.022 | 0.837 ± 0.048 | 0.853 ± 0.053 | 0.902 ± 0.016 | 0.908 ± 0.020 | 0.907 ± 0.019 |
| $datasets_{a}ll/abalone-17_{v}s_{7}-8-9-10.dat$ | 0.965 ± 0.005 | 0.963 ± 0.006 | 0.965 ± 0.005 | **0.968 ± 0.009** | **0.968 ± 0.009** | 0.966 ± 0.006 | 0.952 ± 0.003 | 0.955 ± 0.008 | 0.963 ± 0.003 | 0.965 ± 0.003 | 0.966 ± 0.004 |
| $datasets_{a}ll/glass-0-1-6_{v}s_{5}.dat$ | 0.959 ± 0.016 | 0.958 ± 0.023 | 0.958 ± 0.023 | 0.951 ± 0.025 | 0.951 ± 0.025 | 0.951 ± 0.025 | 0.952 ± 0.035 | 0.921 ± 0.031 | **0.970 ± 0.019** | 0.963 ± 0.021 | 0.948 ± 0.029 |
| $datasets_{a}ll/ecoli-0-1-3-7_{v}s_{2}-6.dat$ | 0.963 ± 0.018 | 0.963 ± 0.018 | 0.963 ± 0.018 | 0.961 ± 0.018 | 0.961 ± 0.018 | 0.961 ± 0.018 | 0.952 ± 0.009 | 0.951 ± 0.007 | **0.973 ± 0.012** | 0.969 ± 0.017 | 0.951 ± 0.007 |
| $datasets_{a}ll/yeast-0-2-5-6_{v}s_{3}-7-8-9.dat$ | 0.909 ± 0.015 | 0.909 ± 0.013 | 0.909 ± 0.015 | 0.912 ± 0.012 | 0.912 ± 0.012 | 0.909 ± 0.013 | 0.877 ± 0.034 | 0.889 ± 0.032 | 0.899 ± 0.009 | 0.918 ± 0.011 | **0.919 ± 0.007** |
| $datasets_{a}ll/yeast5.dat$ | 0.976 ± 0.006 | 0.977 ± 0.005 | 0.976 ± 0.006 | 0.973 ± 0.006 | 0.973 ± 0.006 | 0.973 ± 0.006 | 0.953 ± 0.014 | 0.954 ± 0.015 | 0.976 ± 0.007 | **0.979 ± 0.005** | 0.974 ± 0.003 |
| $datasets_{a}ll/glass-0-1-4-6_{v}s_{2}.dat$ | 0.861 ± 0.022 | 0.855 ± 0.021 | 0.854 ± 0.020 | 0.850 ± 0.027 | 0.850 ± 0.027 | 0.850 ± 0.027 | 0.854 ± 0.031 | 0.841 ± 0.008 | 0.859 ± 0.019 | **0.866 ± 0.035** | 0.859 ± 0.037 |
| $datasets_{a}ll/yeast-0-5-6-7-9_{v}s_{4}.dat$ | 0.895 ± 0.018 | 0.892 ± 0.020 | 0.892 ± 0.014 | 0.889 ± 0.015 | 0.889 ± 0.015 | 0.889 ± 0.015 | 0.821 ± 0.017 | 0.828 ± 0.030 | 0.886 ± 0.018 | 0.895 ± 0.014 | **0.900 ± 0.018** |
| $datasets_{a}ll/yeast3.dat$ | 0.936 ± 0.006 | 0.933 ± 0.009 | 0.935 ± 0.006 | 0.929 ± 0.009 | 0.929 ± 0.009 | 0.932 ± 0.009 | 0.815 ± 0.044 | 0.823 ± 0.047 | 0.934 ± 0.008 | 0.940 ± 0.008 | **0.941 ± 0.008** |
| $datasets_{a}ll/kr-vs-k-zero_{v}s_{e}ight.dat$ | 0.992 ± 0.005 | 0.993 ± 0.006 | 0.993 ± 0.006 | 0.994 ± 0.003 | 0.995 ± 0.003 | 0.995 ± 0.003 | 0.963 ± 0.001 | 0.963 ± 0.001 | 0.996 ± 0.003 | **0.997 ± 0.003** | 0.995 ± 0.003 |
| $datasets_{a}ll/ecoli-0-6-7_{v}s_{3}-5.dat$ | 0.935 ± 0.018 | 0.936 ± 0.016 | 0.936 ± 0.016 | 0.915 ± 0.025 | 0.915 ± 0.025 | 0.917 ± 0.026 | 0.855 ± 0.049 | 0.855 ± 0.037 | 0.939 ± 0.021 | 0.950 ± 0.018 | **0.958 ± 0.012** |
| $datasets_{a}ll/kddcup-rootkit-imap_{v}s_{b}ack.dat$ | 1.000 ± 0.001 | 1.000 ± 0.001 | 1.000 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.998 ± 0.002 | **1.000 ± 0.000** | 1.000 ± 0.000 | 0.999 ± 0.001 |
| $datasets_{a}ll/winequality-red-8_{v}s_{6}.dat$ | 0.962 ± 0.011 | 0.966 ± 0.010 | 0.966 ± 0.009 | 0.962 ± 0.011 | 0.962 ± 0.011 | 0.963 ± 0.011 | **0.966 ± 0.012** | 0.954 ± 0.012 | 0.956 ± 0.006 | 0.959 ± 0.008 | 0.961 ± 0.014 |
| $datasets_{a}ll/flare-F.dat$ | 0.930 ± 0.008 | 0.930 ± 0.008 | 0.930 ± 0.008 | 0.932 ± 0.008 | 0.933 ± 0.012 | 0.930 ± 0.009 | 0.923 ± 0.007 | 0.921 ± 0.002 | 0.935 ± 0.004 | **0.937 ± 0.004** | 0.935 ± 0.006 |
| $datasets_{a}ll/glass4.dat$ | 0.944 ± 0.022 | 0.943 ± 0.027 | 0.946 ± 0.026 | 0.933 ± 0.027 | 0.933 ± 0.027 | 0.933 ± 0.027 | 0.936 ± 0.026 | 0.938 ± 0.027 | 0.951 ± 0.020 | **0.955 ± 0.017** | 0.947 ± 0.019 |
| $datasets_{a}ll/haberman.dat$ | **0.662 ± 0.028** | 0.657 ± 0.034 | 0.655 ± 0.034 | 0.655 ± 0.043 | 0.659 ± 0.036 | 0.649 ± 0.045 | 0.632 ± 0.067 | 0.617 ± 0.054 | 0.659 ± 0.031 | 0.656 ± 0.036 | 0.645 ± 0.040 |
| $datasets_{a}ll/poker-8-9_{v}s_{6}.dat$ | **0.977 ± 0.010** | 0.974 ± 0.010 | 0.976 ± 0.010 | 0.976 ± 0.010 | 0.976 ± 0.010 | 0.976 ± 0.010 | 0.967 ± 0.001 | 0.967 ± 0.001 | 0.971 ± 0.004 | 0.976 ± 0.010 | 0.974 ± 0.009 |
| $datasets_{a}ll/yeast-1-4-5-8_{v}s_{7}.dat$ | 0.915 ± 0.000 | 0.915 ± 0.000 | 0.917 ± 0.005 | 0.919 ± 0.008 | 0.919 ± 0.008 | 0.919 ± 0.008 | 0.915 ± 0.000 | 0.915 ± 0.000 | 0.920 ± 0.004 | 0.920 ± 0.010 | **0.924 ± 0.015** |
| $datasets_{a}ll/ecoli-0-2-6-7_{v}s_{3}-5.dat$ | 0.910 ± 0.054 | 0.904 ± 0.056 | 0.909 ± 0.052 | 0.917 ± 0.042 | 0.917 ± 0.042 | 0.917 ± 0.042 | 0.859 ± 0.053 | 0.879 ± 0.049 | 0.936 ± 0.011 | 0.945 ± 0.015 | **0.951 ± 0.011** |
| $datasets_{a}ll/glass-0-1-6_{v}s_{2}.dat$ | **0.867 ± 0.030** | 0.853 ± 0.032 | 0.854 ± 0.032 | 0.859 ± 0.047 | 0.859 ± 0.047 | 0.850 ± 0.040 | 0.847 ± 0.031 | 0.859 ± 0.047 | 0.861 ± 0.018 | 0.864 ± 0.031 | 0.851 ± 0.033 |
| $datasets_{a}ll/yeast4.dat$ | 0.947 ± 0.009 | 0.947 ± 0.007 | 0.949 ± 0.007 | **0.954 ± 0.011** | 0.954 ± 0.010 | 0.954 ± 0.014 | 0.942 ± 0.015 | 0.932 ± 0.001 | 0.949 ± 0.005 | 0.952 ± 0.007 | 0.953 ± 0.007 |
| $datasets_{a}ll/page-blocks0.dat$ | 0.970 ± 0.003 | 0.969 ± 0.003 | 0.969 ± 0.003 | 0.968 ± 0.003 | 0.968 ± 0.003 | 0.967 ± 0.004 | 0.961 ± 0.004 | 0.962 ± 0.004 | 0.965 ± 0.003 | **0.971 ± 0.002** | 0.971 ± 0.002 |
| $datasets_{a}ll/ecoli-0-1-4-7_{v}s_{2}-3-5-6.dat$ | 0.945 ± 0.018 | 0.939 ± 0.013 | 0.942 ± 0.015 | 0.937 ± 0.018 | 0.937 ± 0.018 | 0.937 ± 0.018 | 0.913 ± 0.032 | 0.922 ± 0.022 | 0.942 ± 0.016 | **0.951 ± 0.011** | 0.951 ± 0.009 |
| $datasets_{a}ll/poker-8_{v}s_{6}.dat$ | 0.979 ± 0.005 | **0.980 ± 0.006** | **0.980 ± 0.006** | 0.977 ± 0.001 | 0.977 ± 0.001 | 0.977 ± 0.001 | 0.977 ± 0.001 | 0.977 ± 0.001 | 0.979 ± 0.006 | 0.978 ± 0.005 | 0.977 ± 0.001 |
| $datasets_{a}ll/ecoli1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/glass0.dat$ | 0.836 ± 0.029 | **0.842 ± 0.022** | 0.838 ± 0.037 | 0.840 ± 0.027 | 0.840 ± 0.027 | 0.836 ± 0.027 | 0.828 ± 0.028 | 0.792 ± 0.048 | 0.788 ± 0.028 | 0.826 ± 0.028 | 0.811 ± 0.048 |
| $datasets_{a}ll/winequality-red-4.dat$ | 0.938 ± 0.006 | 0.936 ± 0.003 | 0.936 ± 0.004 | **0.941 ± 0.008** | **0.941 ± 0.008** | 0.938 ± 0.006 | 0.938 ± 0.011 | 0.935 ± 0.001 | 0.940 ± 0.005 | 0.939 ± 0.005 | 0.939 ± 0.007 |
| $datasets_{a}ll/pima.dat$ | 0.705 ± 0.023 | 0.711 ± 0.027 | 0.700 ± 0.019 | 0.712 ± 0.025 | 0.721 ± 0.011 | 0.705 ± 0.016 | 0.659 ± 0.030 | 0.665 ± 0.035 | 0.685 ± 0.018 | **0.729 ± 0.015** | 0.722 ± 0.020 |
| $datasets_{a}ll/abalone-19_{v}s_{1}0-11-12-13.dat$ | 0.963 ± 0.006 | 0.965 ± 0.008 | **0.965 ± 0.008** | 0.961 ± 0.000 | 0.961 ± 0.000 | 0.961 ± 0.000 | 0.961 ± 0.000 | 0.961 ± 0.000 | 0.962 ± 0.002 | 0.961 ± 0.000 | 0.962 ± 0.003 |
| $datasets_{a}ll/ecoli2.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/abalone9-18.dat$ | **0.935 ± 0.013** | 0.932 ± 0.011 | 0.929 ± 0.013 | 0.930 ± 0.019 | 0.930 ± 0.019 | 0.930 ± 0.020 | 0.891 ± 0.009 | 0.907 ± 0.028 | 0.919 ± 0.010 | 0.928 ± 0.012 | 0.925 ± 0.023 |
| $datasets_{a}ll/yeast-1-2-8-9_{v}s_{7}.dat$ | **0.955 ± 0.013** | 0.952 ± 0.012 | 0.954 ± 0.013 | 0.946 ± 0.014 | 0.948 ± 0.014 | 0.948 ± 0.014 | 0.944 ± 0.013 | 0.938 ± 0.000 | 0.950 ± 0.006 | 0.951 ± 0.007 | 0.946 ± 0.010 |
| $datasets_{a}ll/winequality-white-3_{v}s_{7}.dat$ | 0.972 ± 0.009 | 0.973 ± 0.008 | 0.974 ± 0.007 | 0.973 ± 0.010 | 0.973 ± 0.010 | 0.973 ± 0.010 | 0.964 ± 0.011 | 0.963 ± 0.011 | 0.971 ± 0.010 | **0.975 ± 0.008** | 0.974 ± 0.009 |
| $datasets_{a}ll/yeast-2_{v}s_{4}.dat$ | 0.939 ± 0.012 | 0.945 ± 0.012 | 0.943 ± 0.010 | 0.946 ± 0.012 | 0.946 ± 0.012 | 0.946 ± 0.012 | 0.915 ± 0.035 | 0.924 ± 0.016 | 0.941 ± 0.010 | 0.948 ± 0.005 | **0.951 ± 0.009** |
| $datasets_{a}ll/winequality-red-3_{v}s_{5}.dat$ | 0.971 ± 0.000 | 0.971 ± 0.000 | 0.971 ± 0.000 | 0.971 ± 0.000 | 0.971 ± 0.000 | 0.971 ± 0.000 | 0.971 ± 0.000 | 0.971 ± 0.000 | **0.973 ± 0.003** | 0.971 ± 0.000 | 0.971 ± 0.000 |
| $datasets_{a}ll/glass2.dat$ | 0.885 ± 0.038 | 0.871 ± 0.027 | 0.866 ± 0.026 | 0.862 ± 0.035 | 0.862 ± 0.035 | 0.862 ± 0.035 | 0.873 ± 0.037 | 0.858 ± 0.028 | 0.880 ± 0.027 | **0.887 ± 0.037** | 0.860 ± 0.035 |
| $datasets_{a}ll/yeast-2_{v}s_{8}.dat$ | **0.974 ± 0.005** | 0.965 ± 0.019 | 0.965 ± 0.019 | 0.933 ± 0.023 | 0.933 ± 0.023 | 0.933 ± 0.023 | 0.923 ± 0.014 | 0.923 ± 0.014 | 0.956 ± 0.011 | 0.968 ± 0.009 | 0.959 ± 0.021 |
| $datasets_{a}ll/glass1.dat$ | 0.790 ± 0.052 | 0.792 ± 0.042 | 0.782 ± 0.045 | 0.782 ± 0.023 | 0.782 ± 0.023 | 0.773 ± 0.029 | 0.785 ± 0.041 | 0.775 ± 0.030 | 0.736 ± 0.028 | 0.782 ± 0.046 | **0.793 ± 0.053** |
| $datasets_{a}ll/zoo-3.dat$ | 0.927 ± 0.039 | 0.919 ± 0.038 | 0.919 ± 0.038 | 0.915 ± 0.036 | 0.915 ± 0.036 | 0.915 ± 0.036 | 0.904 ± 0.018 | 0.904 ± 0.018 | 0.923 ± 0.030 | 0.931 ± 0.037 | **0.933 ± 0.038** |
| $datasets_{a}ll/glass-0-1-5_{v}s_{2}.dat$ | 0.865 ± 0.049 | 0.842 ± 0.039 | 0.851 ± 0.045 | 0.812 ± 0.011 | 0.812 ± 0.011 | 0.812 ± 0.011 | 0.839 ± 0.038 | 0.833 ± 0.045 | 0.852 ± 0.027 | **0.867 ± 0.033** | 0.830 ± 0.033 |
| $datasets_{a}ll/abalone-20_{v}s_{8}-9-10.dat$ | 0.978 ± 0.005 | 0.978 ± 0.005 | 0.978 ± 0.005 | 0.974 ± 0.004 | 0.974 ± 0.004 | 0.974 ± 0.004 | 0.975 ± 0.004 | 0.973 ± 0.000 | 0.978 ± 0.003 | 0.978 ± 0.006 | **0.978 ± 0.006** |
| $datasets_{a}ll/kddcup-buffer_{o}verflow_{v}s_{b}ack.dat$ | 1.000 ± 0.001 | 1.000 ± 0.001 | 1.000 ± 0.001 | 0.999 ± 0.002 | 0.999 ± 0.002 | 0.999 ± 0.002 | 0.998 ± 0.002 | 0.998 ± 0.001 | **1.000 ± 0.000** | **1.000 ± 0.000** | 1.000 ± 0.001 |
| $datasets_{a}ll/winequality-white-3-9_{v}s_{5}.dat$ | 0.967 ± 0.002 | 0.968 ± 0.003 | 0.968 ± 0.003 | 0.967 ± 0.003 | 0.967 ± 0.003 | 0.967 ± 0.001 | 0.967 ± 0.001 | 0.967 ± 0.001 | 0.972 ± 0.004 | **0.974 ± 0.007** | 0.970 ± 0.006 |
| $datasets_{a}ll/vehicle3.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/vehicle1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_{a}ll/page-blocks-1-3_{v}s_{4}.dat$ | 0.987 ± 0.010 | 0.988 ± 0.010 | 0.988 ± 0.010 | 0.986 ± 0.009 | 0.986 ± 0.009 | 0.986 ± 0.009 | 0.983 ± 0.009 | 0.983 ± 0.006 | 0.985 ± 0.012 | **0.989 ± 0.005** | 0.987 ± 0.008 |
| $datasets_{a}ll/ecoli-0-6-7_{v}s_{5}.dat$ | 0.929 ± 0.048 | 0.915 ± 0.059 | 0.915 ± 0.059 | 0.939 ± 0.021 | 0.939 ± 0.021 | 0.939 ± 0.021 | 0.896 ± 0.040 | 0.911 ± 0.033 | 0.951 ± 0.017 | 0.956 ± 0.022 | **0.958 ± 0.016** |
| $datasets_{a}ll/poker-8-9_{v}s_{5}.dat$ | 0.976 ± 0.001 | 0.976 ± 0.001 | 0.976 ± 0.001 | 0.977 ± 0.004 | 0.976 ± 0.001 | 0.976 ± 0.001 | 0.976 ± 0.001 | 0.976 ± 0.001 | **0.980 ± 0.003** | 0.978 ± 0.005 | 0.976 ± 0.001 |
| $datasets_{a}ll/yeast-0-3-5-9_{v}s_{7}-8.dat$ | **0.888 ± 0.021** | 0.886 ± 0.024 | 0.887 ± 0.022 | 0.877 ± 0.028 | 0.877 ± 0.028 | 0.884 ± 0.020 | 0.833 ± 0.042 | 0.830 ± 0.035 | 0.862 ± 0.014 | 0.872 ± 0.013 | 0.879 ± 0.023 |

# **Table 5.** Recall

| Dataset name | DE-Forest-gm | DE-Forest-AUC | DE-Forest-bac | DE-Forest-gm-b | DE-Forest-AUC-b | DE-Forest-bac-b | RandomFS | RandomFS-b | DT | RF | RF-b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $datasets_all/glass5.dat$ | 0.965 ± 0.016 | 0.962 ± 0.014 | 0.963 ± 0.014 | 0.958 ± 0.006 | 0.958 ± 0.006 | 0.958 ± 0.006 | 0.963 ± 0.008 | 0.964 ± 0.010 | 0.956 ± 0.020 | **0.971 ± 0.010** | 0.965 ± 0.006 |
| $datasets_all/winequality-white-9_vs_4.dat$ | 0.968 ± 0.013 | 0.968 ± 0.013 | 0.968 ± 0.013 | **0.974 ± 0.009** | **0.974 ± 0.009** | **0.974 ± 0.009** | 0.965 ± 0.010 | 0.970 ± 0.006 | 0.952 ± 0.018 | 0.970 ± 0.008 | 0.971 ± 0.006 |
| $datasets_all/winequality-red-8_vs_6-7.dat$ | 0.980 ± 0.003 | 0.978 ± 0.003 | 0.978 ± 0.003 | **0.981 ± 0.001** | **0.981 ± 0.001** | **0.981 ± 0.001** | 0.981 ± 0.001 | 0.981 ± 0.001 | 0.955 ± 0.009 | 0.978 ± 0.003 | 0.980 ± 0.002 |
| $datasets_all/yeast1.dat$ | 0.737 ± 0.016 | 0.741 ± 0.006 | 0.734 ± 0.011 | 0.729 ± 0.008 | 0.730 ± 0.010 | 0.731 ± 0.009 | 0.716 ± 0.008 | 0.717 ± 0.008 | 0.698 ± 0.010 | **0.758 ± 0.010** | 0.754 ± 0.011 |
| $datasets_all/yeast6.dat$ | 0.977 ± 0.003 | 0.978 ± 0.003 | 0.977 ± 0.002 | 0.978 ± 0.001 | 0.978 ± 0.001 | 0.978 ± 0.001 | 0.976 ± 0.001 | 0.977 ± 0.001 | 0.968 ± 0.007 | 0.980 ± 0.004 | **0.980 ± 0.003** |
| $datasets_all/cleveland-0_vs_4.dat$ | 0.928 ± 0.020 | 0.933 ± 0.010 | 0.933 ± 0.011 | **0.941 ± 0.017** | **0.941 ± 0.017** | 0.940 ± 0.018 | 0.923 ± 0.015 | 0.928 ± 0.010 | 0.908 ± 0.026 | 0.939 ± 0.011 | 0.941 ± 0.012 |
| $datasets_all/ecoli-0-1_vs_2-3-5.dat$ | 0.940 ± 0.019 | 0.939 ± 0.019 | 0.942 ± 0.020 | 0.943 ± 0.011 | 0.943 ± 0.011 | 0.943 ± 0.011 | 0.929 ± 0.016 | 0.922 ± 0.011 | 0.936 ± 0.012 | **0.952 ± 0.007** | 0.950 ± 0.010 |
| $datasets_all/yeast-1_vs_7.dat$ | 0.932 ± 0.012 | 0.934 ± 0.007 | 0.936 ± 0.009 | **0.937 ± 0.006** | **0.937 ± 0.006** | 0.937 ± 0.006 | 0.936 ± 0.003 | 0.932 ± 0.008 | 0.908 ± 0.010 | 0.935 ± 0.006 | 0.936 ± 0.007 |
| $datasets_all/abalone-21_vs_8.dat$ | 0.976 ± 0.005 | 0.976 ± 0.005 | 0.976 ± 0.005 | 0.978 ± 0.004 | 0.978 ± 0.004 | 0.978 ± 0.004 | 0.978 ± 0.005 | 0.977 ± 0.003 | 0.971 ± 0.005 | **0.979 ± 0.007** | 0.979 ± 0.006 |
| $datasets_all/abalone19.dat$ | 0.991 ± 0.001 | 0.991 ± 0.001 | 0.991 ± 0.002 | 0.992 ± 0.000 | 0.992 ± 0.000 | 0.992 ± 0.000 | 0.992 ± 0.000 | **0.992 ± 0.000** | 0.983 ± 0.003 | 0.992 ± 0.000 | 0.992 ± 0.000 |
| $datasets_all/poker-9_vs_7.dat$ | 0.970 ± 0.014 | 0.970 ± 0.014 | 0.970 ± 0.014 | 0.967 ± 0.000 | 0.968 ± 0.002 | 0.968 ± 0.002 | 0.970 ± 0.005 | 0.967 ± 0.000 | 0.963 ± 0.012 | **0.977 ± 0.007** | 0.968 ± 0.002 |
| $datasets_all/ecoli3.dat$ | 0.917 ± 0.011 | 0.910 ± 0.018 | 0.911 ± 0.016 | 0.917 ± 0.014 | 0.917 ± 0.014 | **0.919 ± 0.014** | 0.894 ± 0.010 | 0.900 ± 0.006 | 0.905 ± 0.020 | 0.913 ± 0.020 | 0.915 ± 0.015 |
| $datasets_all/abalone-17_vs_7-8-9-10.dat$ | 0.974 ± 0.003 | 0.973 ± 0.003 | 0.974 ± 0.002 | **0.976 ± 0.001** | **0.976 ± 0.001** | 0.976 ± 0.001 | 0.975 ± 0.001 | 0.975 ± 0.001 | 0.962 ± 0.005 | 0.974 ± 0.001 | 0.975 ± 0.001 |
| $datasets_all/glass-0-1-6_vs_5.dat$ | 0.960 ± 0.016 | 0.965 ± 0.015 | 0.965 ± 0.015 | 0.960 ± 0.011 | 0.960 ± 0.011 | 0.960 ± 0.011 | 0.965 ± 0.014 | 0.955 ± 0.012 | 0.964 ± 0.026 | **0.966 ± 0.013** | 0.962 ± 0.013 |
| $datasets_all/ecoli-0-1-3-7_vs_2-6.dat$ | 0.978 ± 0.006 | 0.978 ± 0.006 | 0.978 ± 0.006 | 0.978 ± 0.007 | 0.978 ± 0.007 | 0.978 ± 0.007 | 0.974 ± 0.005 | 0.975 ± 0.003 | 0.968 ± 0.010 | **0.979 ± 0.008** | 0.975 ± 0.003 |
| $datasets_all/yeast-0-2-5-6_vs_3-7-8-9.dat$ | 0.919 ± 0.013 | 0.919 ± 0.010 | 0.920 ± 0.011 | 0.922 ± 0.008 | 0.922 ± 0.008 | 0.921 ± 0.009 | 0.906 ± 0.005 | 0.905 ± 0.004 | 0.896 ± 0.010 | 0.927 ± 0.007 | **0.928 ± 0.005** |
| $datasets_all/yeast5.dat$ | 0.978 ± 0.004 | 0.979 ± 0.004 | 0.979 ± 0.004 | 0.976 ± 0.004 | 0.976 ± 0.004 | 0.976 ± 0.004 | 0.971 ± 0.001 | 0.971 ± 0.001 | 0.976 ± 0.006 | **0.981 ± 0.004** | 0.977 ± 0.002 |
| $datasets_all/glass-0-1-4-6_vs_2.dat$ | 0.890 ± 0.029 | 0.893 ± 0.025 | 0.892 ± 0.025 | **0.916 ± 0.005** | **0.916 ± 0.005** | 0.913 ± 0.008 | 0.910 ± 0.011 | 0.915 ± 0.006 | 0.847 ± 0.029 | 0.892 ± 0.024 | 0.911 ± 0.014 |
| $datasets_all/yeast-0-5-6-7-9_vs_4.dat$ | 0.911 ± 0.011 | 0.908 ± 0.010 | 0.908 ± 0.011 | 0.909 ± 0.006 | 0.909 ± 0.006 | 0.909 ± 0.006 | 0.902 ± 0.004 | 0.901 ± 0.006 | 0.884 ± 0.027 | 0.911 ± 0.010 | **0.915 ± 0.010** |
| $datasets_all/yeast3.dat$ | 0.939 ± 0.004 | 0.937 ± 0.008 | 0.938 ± 0.005 | 0.934 ± 0.007 | 0.934 ± 0.007 | 0.936 ± 0.007 | 0.891 ± 0.001 | 0.891 ± 0.001 | 0.932 ± 0.007 | 0.943 ± 0.006 | **0.944 ± 0.007** |
| $datasets_all/kr-vs-k-zero_vs_eight.dat$ | 0.992 ± 0.005 | 0.993 ± 0.005 | 0.993 ± 0.005 | 0.994 ± 0.003 | 0.995 ± 0.003 | 0.995 ± 0.003 | 0.982 ± 0.001 | 0.982 ± 0.001 | 0.996 ± 0.003 | **0.997 ± 0.003** | 0.995 ± 0.003 |
| $datasets_all/ecoli-0-6-7_vs_3-5.dat$ | 0.937 ± 0.017 | 0.937 ± 0.017 | 0.937 ± 0.017 | 0.921 ± 0.013 | 0.921 ± 0.013 | 0.922 ± 0.013 | 0.905 ± 0.012 | 0.900 ± 0.013 | 0.937 ± 0.021 | 0.951 ± 0.016 | **0.959 ± 0.010** |
| $datasets_all/kddcup-rootkit-imap_vs_back.dat$ | 1.000 ± 0.001 | 1.000 ± 0.001 | 1.000 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.999 ± 0.001 | 0.998 ± 0.002 | **1.000 ± 0.000** | 1.000 ± 0.000 | 0.999 ± 0.001 |
| $datasets_all/winequality-red-8_vs_6.dat$ | 0.969 ± 0.006 | 0.969 ± 0.007 | 0.970 ± 0.006 | 0.971 ± 0.004 | 0.971 ± 0.004 | 0.972 ± 0.004 | **0.974 ± 0.002** | 0.972 ± 0.003 | 0.945 ± 0.014 | 0.968 ± 0.006 | 0.972 ± 0.004 |
| $datasets_all/flare-F.dat$ | 0.953 ± 0.006 | 0.952 ± 0.004 | 0.953 ± 0.004 | 0.950 ± 0.005 | 0.951 ± 0.006 | 0.952 ± 0.004 | **0.960 ± 0.001** | 0.959 ± 0.002 | 0.939 ± 0.010 | 0.947 ± 0.006 | 0.946 ± 0.008 |
| $datasets_all/glass4.dat$ | 0.948 ± 0.016 | 0.945 ± 0.024 | 0.950 ± 0.021 | 0.941 ± 0.017 | 0.941 ± 0.017 | 0.941 ± 0.017 | 0.943 ± 0.017 | 0.947 ± 0.015 | 0.943 ± 0.028 | **0.953 ± 0.019** | 0.951 ± 0.014 |
| $datasets_all/haberman.dat$ | 0.675 ± 0.033 | 0.676 ± 0.028 | 0.677 ± 0.029 | 0.697 ± 0.031 | 0.700 ± 0.023 | 0.690 ± 0.034 | **0.733 ± 0.010** | 0.728 ± 0.008 | 0.654 ± 0.027 | 0.679 ± 0.035 | 0.686 ± 0.031 |
| $datasets_all/poker-8-9_vs_6.dat$ | **0.985 ± 0.002** | 0.984 ± 0.002 | 0.985 ± 0.002 | 0.984 ± 0.002 | 0.984 ± 0.002 | 0.984 ± 0.002 | 0.983 ± 0.001 | 0.983 ± 0.001 | 0.969 ± 0.007 | 0.985 ± 0.002 | 0.984 ± 0.001 |
| $datasets_all/yeast-1-4-5-8_vs_7.dat$ | 0.954 ± 0.004 | 0.953 ± 0.004 | 0.952 ± 0.006 | 0.954 ± 0.003 | 0.954 ± 0.003 | 0.954 ± 0.003 | **0.956 ± 0.001** | 0.956 ± 0.001 | 0.914 ± 0.013 | 0.952 ± 0.005 | 0.955 ± 0.002 |
| $datasets_all/ecoli-0-2-6-7_vs_3-5.dat$ | 0.930 ± 0.023 | 0.927 ± 0.026 | 0.930 ± 0.021 | 0.925 ± 0.024 | 0.925 ± 0.024 | 0.925 ± 0.024 | 0.904 ± 0.023 | 0.909 ± 0.013 | 0.931 ± 0.016 | 0.946 ± 0.015 | **0.951 ± 0.010** |
| $datasets_all/glass-0-1-6_vs_2.dat$ | 0.908 ± 0.010 | 0.905 ± 0.011 | 0.906 ± 0.010 | **0.914 ± 0.009** | **0.914 ± 0.009** | 0.911 ± 0.008 | 0.897 ± 0.014 | 0.911 ± 0.011 | 0.851 ± 0.035 | 0.896 ± 0.019 | 0.909 ± 0.005 |
| $datasets_all/yeast4.dat$ | 0.960 ± 0.005 | 0.960 ± 0.005 | 0.962 ± 0.003 | 0.966 ± 0.003 | 0.966 ± 0.003 | **0.966 ± 0.002** | 0.966 ± 0.001 | 0.966 ± 0.001 | 0.947 ± 0.006 | 0.964 ± 0.003 | 0.965 ± 0.002 |
| $datasets_all/page-blocks0.dat$ | 0.970 ± 0.003 | 0.970 ± 0.003 | 0.970 ± 0.002 | 0.969 ± 0.003 | 0.969 ± 0.003 | 0.968 ± 0.004 | 0.963 ± 0.004 | 0.963 ± 0.004 | 0.965 ± 0.003 | **0.971 ± 0.002** | 0.971 ± 0.001 |
| $datasets_all/ecoli-0-1-4-7_vs_2-3-5-6.dat$ | 0.948 ± 0.016 | 0.943 ± 0.010 | 0.946 ± 0.011 | 0.940 ± 0.011 | 0.940 ± 0.011 | 0.939 ± 0.010 | 0.921 ± 0.006 | 0.926 ± 0.012 | 0.936 ± 0.020 | **0.954 ± 0.010** | 0.952 ± 0.007 |
| $datasets_all/poker-8_vs_6.dat$ | 0.989 ± 0.002 | **0.989 ± 0.002** | **0.989 ± 0.002** | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.980 ± 0.008 | 0.989 ± 0.001 | 0.988 ± 0.001 |
| $datasets_all/ecoli1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/glass0.dat$ | 0.837 ± 0.027 | **0.842 ± 0.020** | 0.837 ± 0.034 | 0.839 ± 0.025 | 0.839 ± 0.025 | 0.836 ± 0.026 | 0.829 ± 0.028 | 0.793 ± 0.044 | 0.783 ± 0.028 | 0.826 ± 0.026 | 0.807 ± 0.045 |
| $datasets_all/winequality-red-4.dat$ | 0.963 ± 0.004 | 0.964 ± 0.002 | 0.962 ± 0.004 | 0.966 ± 0.002 | 0.966 ± 0.002 | 0.965 ± 0.003 | **0.967 ± 0.001** | 0.966 ± 0.001 | 0.937 ± 0.011 | 0.961 ± 0.003 | 0.965 ± 0.001 |
| $datasets_all/pima.dat$ | 0.716 ± 0.019 | 0.721 ± 0.024 | 0.710 ± 0.017 | 0.722 ± 0.021 | 0.729 ± 0.011 | 0.715 ± 0.014 | 0.679 ± 0.019 | 0.683 ± 0.026 | 0.682 ± 0.017 | **0.736 ± 0.014** | 0.731 ± 0.018 |
| $datasets_all/abalone-19_vs_10-11-12-13.dat$ | 0.979 ± 0.003 | 0.978 ± 0.004 | 0.979 ± 0.002 | 0.979 ± 0.002 | 0.979 ± 0.002 | 0.979 ± 0.002 | 0.980 ± 0.000 | **0.980 ± 0.000** | 0.960 ± 0.007 | 0.979 ± 0.002 | 0.980 ± 0.001 |
| $datasets_all/ecoli2.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/abalone9-18.dat$ | **0.946 ± 0.008** | 0.945 ± 0.006 | 0.944 ± 0.006 | 0.944 ± 0.005 | 0.944 ± 0.005 | 0.944 ± 0.003 | 0.940 ± 0.003 | 0.943 ± 0.003 | 0.917 ± 0.009 | 0.943 ± 0.007 | 0.943 ± 0.007 |
| $datasets_all/yeast-1-2-8-9_vs_7.dat$ | 0.966 ± 0.005 | 0.964 ± 0.006 | 0.966 ± 0.005 | 0.967 ± 0.003 | 0.967 ± 0.003 | 0.967 ± 0.003 | **0.969 ± 0.001** | 0.968 ± 0.000 | 0.939 ± 0.018 | 0.965 ± 0.004 | 0.967 ± 0.002 |
| $datasets_all/winequality-white-3_vs_7.dat$ | 0.978 ± 0.005 | 0.978 ± 0.005 | 0.979 ± 0.004 | 0.979 ± 0.003 | 0.979 ± 0.003 | 0.979 ± 0.003 | 0.978 ± 0.001 | 0.979 ± 0.001 | 0.975 ± 0.009 | **0.981 ± 0.003** | 0.980 ± 0.002 |
| $datasets_all/yeast-2_vs_4.dat$ | 0.942 ± 0.009 | 0.947 ± 0.010 | 0.945 ± 0.009 | 0.949 ± 0.010 | 0.949 ± 0.010 | 0.949 ± 0.010 | 0.920 ± 0.009 | 0.923 ± 0.013 | 0.941 ± 0.011 | 0.950 ± 0.005 | **0.953 ± 0.008** |
| $datasets_all/winequality-red-3_vs_5.dat$ | 0.983 ± 0.004 | 0.982 ± 0.004 | 0.982 ± 0.004 | 0.985 ± 0.003 | 0.985 ± 0.003 | 0.985 ± 0.003 | 0.985 ± 0.001 | **0.986 ± 0.000** | 0.973 ± 0.006 | 0.983 ± 0.004 | **0.986 ± 0.000** |
| $datasets_all/glass2.dat$ | 0.909 ± 0.034 | 0.914 ± 0.010 | 0.912 ± 0.010 | **0.922 ± 0.007** | **0.922 ± 0.007** | **0.922 ± 0.007** | 0.912 ± 0.017 | 0.918 ± 0.010 | 0.876 ± 0.030 | 0.908 ± 0.022 | 0.921 ± 0.012 |
| $datasets_all/yeast-2_vs_8.dat$ | **0.974 ± 0.006** | 0.971 ± 0.008 | 0.971 ± 0.008 | 0.961 ± 0.007 | 0.961 ± 0.007 | 0.961 ± 0.007 | 0.959 ± 0.001 | 0.959 ± 0.001 | 0.953 ± 0.011 | 0.970 ± 0.007 | 0.967 ± 0.007 |
| $datasets_all/glass1.dat$ | 0.792 ± 0.047 | 0.791 ± 0.037 | 0.784 ± 0.040 | 0.780 ± 0.021 | 0.780 ± 0.021 | 0.772 ± 0.026 | 0.783 ± 0.039 | 0.769 ± 0.025 | 0.731 ± 0.026 | 0.784 ± 0.044 | **0.793 ± 0.048** |
| $datasets_all/zoo-3.dat$ | 0.957 ± 0.014 | 0.955 ± 0.015 | 0.955 ± 0.015 | 0.953 ± 0.018 | 0.953 ± 0.018 | 0.953 ± 0.018 | 0.951 ± 0.009 | 0.951 ± 0.009 | 0.925 ± 0.029 | 0.955 ± 0.018 | **0.960 ± 0.015** |
| $datasets_all/glass-0-1-5_vs_2.dat$ | 0.899 ± 0.022 | 0.883 ± 0.024 | 0.888 ± 0.025 | 0.895 ± 0.013 | 0.895 ± 0.013 | 0.895 ± 0.013 | 0.894 ± 0.011 | 0.900 ± 0.009 | 0.853 ± 0.033 | 0.899 ± 0.016 | **0.901 ± 0.008** |
| $datasets_all/abalone-20_vs_8-9-10.dat$ | 0.986 ± 0.001 | 0.985 ± 0.002 | 0.986 ± 0.001 | 0.986 ± 0.001 | 0.986 ± 0.001 | 0.986 ± 0.001 | **0.987 ± 0.000** | 0.986 ± 0.000 | 0.979 ± 0.003 | 0.986 ± 0.002 | 0.986 ± 0.001 |
| $datasets_all/kddcup-buffer_overflow_vs_back.dat$ | 1.000 ± 0.001 | 1.000 ± 0.001 | 1.000 ± 0.001 | 0.999 ± 0.002 | 0.999 ± 0.002 | 0.999 ± 0.002 | 0.998 ± 0.002 | 0.997 ± 0.001 | **1.000 ± 0.000** | **1.000 ± 0.000** | 1.000 ± 0.001 |
| $datasets_all/winequality-white-3-9_vs_5.dat$ | 0.980 ± 0.002 | 0.981 ± 0.002 | 0.981 ± 0.002 | 0.983 ± 0.002 | 0.983 ± 0.002 | 0.982 ± 0.002 | 0.983 ± 0.001 | **0.983 ± 0.001** | 0.974 ± 0.004 | **0.983 ± 0.002** | 0.982 ± 0.001 |
| $datasets_all/vehicle3.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/vehicle1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/page-blocks-1-3_vs_4.dat$ | 0.987 ± 0.010 | 0.988 ± 0.010 | 0.988 ± 0.010 | 0.986 ± 0.008 | 0.986 ± 0.008 | 0.986 ± 0.008 | 0.983 ± 0.008 | 0.983 ± 0.006 | 0.984 ± 0.011 | **0.989 ± 0.004** | 0.987 ± 0.008 |
| $datasets_all/ecoli-0-6-7_vs_5.dat$ | 0.942 ± 0.027 | 0.934 ± 0.038 | 0.934 ± 0.038 | 0.940 ± 0.016 | 0.940 ± 0.016 | 0.940 ± 0.016 | 0.917 ± 0.009 | 0.923 ± 0.011 | 0.950 ± 0.021 | **0.956 ± 0.019** | **0.956 ± 0.016** |
| $datasets_all/poker-8-9_vs_5.dat$ | 0.987 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.001 | **0.988 ± 0.001** | 0.988 ± 0.001 | 0.988 ± 0.001 | 0.988 ± 0.000 | 0.988 ± 0.000 | 0.975 ± 0.005 | 0.987 ± 0.001 | 0.988 ± 0.001 |
| $datasets_all/yeast-0-3-5-9_vs_7-8.dat$ | **0.906 ± 0.008** | 0.903 ± 0.012 | 0.905 ± 0.008 | 0.903 ± 0.005 | 0.903 ± 0.005 | 0.904 ± 0.005 | 0.901 ± 0.005 | 0.902 ± 0.002 | 0.855 ± 0.019 | 0.898 ± 0.008 | 0.902 ± 0.010 |

**Table 6.** Specificity

| Dataset name | DE-Forest-gm | DE-Forest-AUC | DE-Forest-bac | DE-Forest-gm-b | DE-Forest-AUC-b | DE-Forest-bac-b | RandomFS | RandomFS-b | DT | RF | RF-b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $datasets_all/glass5.dat$ | 0.469 ± 0.357 | 0.349 ± 0.245 | 0.373 ± 0.271 | 0.066 ± 0.071 | 0.066 ± 0.071 | 0.066 ± 0.071 | 0.238 ± 0.194 | 0.175 ± 0.273 | **0.578 ± 0.344** | 0.439 ± 0.214 | 0.310 ± 0.189 |
| $datasets_all/winequality-white-9_vs_4.dat$ | 0.111 ± 0.166 | 0.111 ± 0.166 | 0.111 ± 0.166 | 0.160 ± 0.201 | 0.160 ± 0.201 | 0.160 ± 0.201 | 0.030 ± 0.006 | 0.030 ± 0.006 | **0.191 ± 0.204** | 0.127 ± 0.192 | 0.062 ± 0.099 |
| $datasets_all/winequality-red-8_vs_6-7.dat$ | 0.141 ± 0.033 | 0.141 ± 0.033 | 0.141 ± 0.033 | 0.130 ± 0.000 | 0.130 ± 0.000 | 0.130 ± 0.000 | 0.130 ± 0.000 | 0.119 ± 0.033 | **0.162 ± 0.070** | 0.130 ± 0.000 | 0.086 ± 0.053 |
| $datasets_all/yeast1.dat$ | 0.512 ± 0.026 | 0.510 ± 0.017 | 0.504 ± 0.019 | 0.464 ± 0.013 | 0.464 ± 0.014 | 0.462 ± 0.018 | 0.312 ± 0.023 | 0.320 ± 0.024 | **0.571 ± 0.018** | 0.555 ± 0.011 | 0.536 ± 0.021 |
| $datasets_all/yeast6.dat$ | 0.236 ± 0.098 | 0.269 ± 0.078 | 0.225 ± 0.083 | 0.191 ± 0.073 | 0.191 ± 0.073 | 0.196 ± 0.071 | 0.029 ± 0.017 | 0.046 ± 0.038 | **0.481 ± 0.106** | 0.358 ± 0.069 | 0.257 ± 0.070 |
| $datasets_all/cleveland-0_vs_4.dat$ | 0.275 ± 0.162 | 0.246 ± 0.114 | 0.246 ± 0.128 | 0.319 ± 0.207 | 0.319 ± 0.207 | 0.304 ± 0.219 | 0.119 ± 0.066 | 0.135 ± 0.071 | **0.387 ± 0.124** | 0.330 ± 0.191 | 0.295 ± 0.187 |
| $datasets_all/ecoli-0-1_vs_2-3-5.dat$ | 0.563 ± 0.141 | 0.563 ± 0.142 | 0.593 ± 0.127 | 0.556 ± 0.143 | 0.556 ± 0.143 | 0.556 ± 0.143 | 0.354 ± 0.143 | 0.286 ± 0.102 | **0.681 ± 0.123** | 0.661 ± 0.112 | 0.601 ± 0.106 |
| $datasets_all/yeast-1_vs_7.dat$ | 0.189 ± 0.068 | 0.183 ± 0.085 | 0.245 ± 0.106 | 0.190 ± 0.062 | 0.190 ± 0.062 | 0.146 ± 0.068 | 0.084 ± 0.040 | 0.078 ± 0.025 | **0.405 ± 0.104** | 0.220 ± 0.064 | 0.177 ± 0.061 |
| $datasets_all/abalone-21_vs_8.dat$ | 0.372 ± 0.143 | 0.372 ± 0.143 | 0.372 ± 0.143 | 0.233 ± 0.168 | 0.233 ± 0.168 | 0.233 ± 0.168 | 0.177 ± 0.132 | 0.122 ± 0.109 | 0.358 ± 0.167 | 0.400 ± 0.177 | **0.442 ± 0.197** |
| $datasets_all/abalone19.dat$ | 0.008 ± 0.000 | 0.014 ± 0.019 | 0.014 ± 0.019 | 0.008 ± 0.000 | 0.008 ± 0.000 | 0.008 ± 0.000 | 0.008 ± 0.000 | 0.008 ± 0.000 | **0.032 ± 0.030** | 0.014 ± 0.019 | 0.008 ± 0.000 |
| $datasets_all/poker-9_vs_7.dat$ | 0.250 ± 0.228 | 0.250 ± 0.228 | 0.250 ± 0.228 | 0.033 ± 0.000 | 0.057 ± 0.073 | 0.057 ± 0.073 | 0.129 ± 0.118 | 0.057 ± 0.072 | **0.347 ± 0.243** | 0.323 ± 0.211 | 0.057 ± 0.073 |
| $datasets_all/ecoli3.dat$ | 0.445 ± 0.109 | 0.458 ± 0.133 | 0.455 ± 0.102 | 0.429 ± 0.111 | 0.429 ± 0.111 | 0.439 ± 0.104 | 0.144 ± 0.063 | 0.165 ± 0.075 | **0.525 ± 0.097** | 0.501 ± 0.121 | 0.450 ± 0.125 |
| $datasets_all/abalone-17_vs_7-8-9-10.dat$ | 0.166 ± 0.081 | 0.152 ± 0.052 | 0.166 ± 0.070 | 0.095 ± 0.053 | 0.095 ± 0.053 | 0.102 ± 0.056 | 0.035 ± 0.030 | 0.035 ± 0.015 | **0.270 ± 0.081** | 0.152 ± 0.039 | 0.122 ± 0.053 |
| $datasets_all/glass-0-1-6_vs_5.dat$ | 0.519 ± 0.169 | 0.519 ± 0.251 | 0.519 ± 0.251 | 0.258 ± 0.149 | 0.258 ± 0.149 | 0.258 ± 0.149 | 0.388 ± 0.305 | 0.163 ± 0.188 | **0.719 ± 0.217** | 0.501 ± 0.249 | 0.338 ± 0.248 |
| $datasets_all/ecoli-0-1-3-7_vs_2-6.dat$ | 0.180 ± 0.212 | 0.180 ± 0.212 | 0.180 ± 0.212 | 0.147 ± 0.209 | 0.147 ± 0.209 | 0.147 ± 0.209 | 0.057 ± 0.097 | 0.025 ± 0.003 | **0.536 ± 0.315** | 0.277 ± 0.231 | 0.025 ± 0.003 |
| $datasets_all/yeast-0-2-5-6_vs_3-7-8-9.dat$ | 0.428 ± 0.069 | 0.428 ± 0.070 | 0.439 ± 0.070 | 0.371 ± 0.087 | 0.371 ± 0.087 | 0.396 ± 0.070 | 0.166 ± 0.068 | 0.155 ± 0.044 | **0.543 ± 0.055** | 0.471 ± 0.064 | 0.461 ± 0.033 |
| $datasets_all/yeast5.dat$ | 0.475 ± 0.114 | 0.484 ± 0.081 | 0.488 ± 0.082 | 0.329 ± 0.111 | 0.329 ± 0.111 | 0.329 ± 0.111 | 0.056 ± 0.029 | 0.052 ± 0.030 | **0.620 ± 0.150** | 0.528 ± 0.108 | 0.409 ± 0.053 |
| $datasets_all/glass-0-1-4-6_vs_2.dat$ | 0.189 ± 0.109 | 0.155 ± 0.111 | 0.155 ± 0.110 | 0.093 ± 0.032 | 0.093 ± 0.032 | 0.093 ± 0.032 | 0.104 ± 0.044 | 0.083 ± 0.004 | **0.227 ± 0.116** | 0.145 ± 0.053 | 0.104 ± 0.044 |
| $datasets_all/yeast-0-5-6-7-9_vs_4.dat$ | 0.315 ± 0.080 | 0.335 ± 0.101 | 0.331 ± 0.067 | 0.223 ± 0.045 | 0.223 ± 0.045 | 0.223 ± 0.045 | 0.100 ± 0.010 | 0.103 ± 0.014 | **0.455 ± 0.064** | 0.328 ± 0.068 | 0.314 ± 0.102 |
| $datasets_all/yeast3.dat$ | 0.689 ± 0.052 | 0.672 ± 0.050 | 0.683 ± 0.058 | 0.576 ± 0.079 | 0.576 ± 0.079 | 0.592 ± 0.078 | 0.114 ± 0.010 | 0.117 ± 0.016 | **0.739 ± 0.051** | 0.682 ± 0.062 | 0.670 ± 0.071 |
| $datasets_all/kr-vs-k-zero_vs_eight.dat$ | 0.652 ± 0.229 | 0.687 ± 0.250 | 0.687 ± 0.250 | 0.701 ± 0.160 | 0.752 ± 0.168 | 0.752 ± 0.168 | 0.018 ± 0.001 | 0.018 ± 0.001 | 0.910 ± 0.111 | **0.920 ± 0.089** | 0.832 ± 0.118 |
| $datasets_all/ecoli-0-6-7_vs_3-5.dat$ | 0.605 ± 0.125 | 0.597 ± 0.143 | 0.597 ± 0.143 | 0.320 ± 0.110 | 0.320 ± 0.110 | 0.320 ± 0.110 | 0.181 ± 0.103 | 0.188 ± 0.077 | **0.710 ± 0.117** | 0.679 ± 0.106 | 0.688 ± 0.071 |
| $datasets_all/kddcup-rootkit-imap_vs_back.dat$ | 0.982 ± 0.054 | 0.982 ± 0.054 | 0.982 ± 0.054 | 0.874 ± 0.092 | 0.874 ± 0.092 | 0.874 ± 0.092 | 0.910 ± 0.107 | 0.811 ± 0.168 | **1.000 ± 0.000** | 0.955 ± 0.045 | 0.928 ± 0.054 |
| $datasets_all/winequality-red-8_vs_6.dat$ | 0.135 ± 0.048 | 0.168 ± 0.097 | 0.168 ± 0.097 | 0.135 ± 0.068 | 0.135 ± 0.068 | 0.135 ± 0.068 | 0.114 ± 0.043 | 0.060 ± 0.050 | **0.264 ± 0.135** | 0.146 ± 0.058 | 0.092 ± 0.053 |
| $datasets_all/flare-F.dat$ | 0.093 ± 0.043 | 0.107 ± 0.053 | 0.098 ± 0.048 | 0.130 ± 0.070 | 0.103 ± 0.054 | 0.112 ± 0.087 | 0.045 ± 0.013 | 0.040 ± 0.001 | **0.201 ± 0.065** | 0.192 ± 0.050 | 0.165 ± 0.049 |
| $datasets_all/glass4.dat$ | 0.422 ± 0.179 | 0.464 ± 0.220 | 0.465 ± 0.220 | 0.261 ± 0.139 | 0.261 ± 0.139 | 0.261 ± 0.139 | 0.311 ± 0.160 | 0.291 ± 0.129 | **0.656 ± 0.138** | 0.470 ± 0.150 | 0.380 ± 0.112 |
| $datasets_all/haberman.dat$ | 0.446 ± 0.050 | 0.433 ± 0.066 | 0.429 ± 0.066 | 0.394 ± 0.061 | 0.401 ± 0.062 | 0.386 ± 0.050 | 0.310 ± 0.057 | 0.298 ± 0.039 | **0.471 ± 0.063** | 0.425 ± 0.055 | 0.388 ± 0.063 |
| $datasets_all/poker-8-9_vs_6.dat$ | 0.118 ± 0.129 | 0.080 ± 0.092 | 0.096 ± 0.094 | 0.074 ± 0.063 | 0.074 ± 0.063 | 0.074 ± 0.063 | 0.017 ± 0.001 | 0.017 ± 0.001 | **0.175 ± 0.129** | 0.104 ± 0.107 | 0.048 ± 0.039 |
| $datasets_all/yeast-1-4-5-8_vs_7.dat$ | 0.043 ± 0.000 | 0.043 ± 0.000 | 0.049 ± 0.019 | 0.056 ± 0.025 | 0.056 ± 0.025 | 0.056 ± 0.025 | 0.043 ± 0.000 | 0.043 ± 0.000 | **0.124 ± 0.041** | 0.056 ± 0.026 | 0.062 ± 0.029 |
| $datasets_all/ecoli-0-2-6-7_vs_3-5.dat$ | 0.498 ± 0.247 | 0.474 ± 0.259 | 0.490 ± 0.245 | 0.400 ± 0.190 | 0.400 ± 0.190 | 0.400 ± 0.190 | 0.244 ± 0.190 | 0.204 ± 0.104 | **0.660 ± 0.137** | 0.638 ± 0.137 | 0.598 ± 0.085 |
| $datasets_all/glass-0-1-6_vs_2.dat$ | 0.186 ± 0.077 | 0.155 ± 0.072 | 0.155 ± 0.072 | 0.121 ± 0.050 | 0.121 ± 0.050 | 0.110 ± 0.043 | 0.118 ± 0.050 | 0.121 ± 0.050 | **0.276 ± 0.086** | 0.229 ± 0.123 | 0.120 ± 0.050 |
| $datasets_all/yeast4.dat$ | 0.170 ± 0.088 | 0.162 ± 0.082 | 0.162 ± 0.082 | 0.124 ± 0.050 | 0.128 ± 0.053 | 0.114 ± 0.046 | 0.053 ± 0.031 | 0.034 ± 0.001 | **0.290 ± 0.092** | 0.192 ± 0.077 | 0.133 ± 0.046 |
| $datasets_all/page-blocks0.dat$ | 0.828 ± 0.027 | 0.826 ± 0.030 | 0.823 ± 0.026 | 0.803 ± 0.025 | 0.803 ± 0.025 | 0.799 ± 0.040 | 0.746 ± 0.035 | 0.748 ± 0.042 | 0.842 ± 0.031 | **0.846 ± 0.028** | 0.839 ± 0.021 |
| $datasets_all/ecoli-0-1-4-7_vs_2-3-5-6.dat$ | 0.573 ± 0.139 | 0.501 ± 0.122 | 0.544 ± 0.108 | 0.425 ± 0.156 | 0.425 ± 0.156 | 0.400 ± 0.140 | 0.194 ± 0.048 | 0.238 ± 0.122 | **0.725 ± 0.096** | 0.614 ± 0.089 | 0.546 ± 0.090 |
| $datasets_all/poker-8_vs_6.dat$ | 0.049 ± 0.111 | 0.061 ± 0.113 | 0.061 ± 0.113 | 0.012 ± 0.001 | 0.012 ± 0.001 | 0.012 ± 0.001 | 0.012 ± 0.001 | 0.012 ± 0.001 | **0.098 ± 0.221** | 0.036 ± 0.074 | 0.012 ± 0.001 |
| $datasets_all/ecoli1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/glass0.dat$ | **0.757 ± 0.061** | 0.751 ± 0.033 | 0.757 ± 0.066 | 0.746 ± 0.058 | 0.746 ± 0.058 | 0.734 ± 0.059 | 0.742 ± 0.041 | 0.669 ± 0.072 | 0.730 ± 0.058 | 0.742 ± 0.064 | 0.742 ± 0.092 |
| $datasets_all/winequality-red-4.dat$ | 0.052 ± 0.030 | 0.040 ± 0.015 | 0.040 ± 0.015 | 0.051 ± 0.025 | 0.051 ± 0.025 | 0.040 ± 0.015 | 0.037 ± 0.011 | 0.033 ± 0.001 | **0.130 ± 0.076** | 0.059 ± 0.029 | 0.048 ± 0.018 |
| $datasets_all/pima.dat$ | 0.599 ± 0.036 | 0.613 ± 0.037 | 0.600 ± 0.030 | 0.600 ± 0.041 | 0.616 ± 0.019 | 0.598 ± 0.029 | 0.492 ± 0.035 | 0.494 ± 0.039 | 0.625 ± 0.028 | **0.639 ± 0.022** | 0.625 ± 0.035 |
| $datasets_all/abalone-19_vs_10-11-12-13.dat$ | 0.026 ± 0.018 | 0.032 ± 0.025 | 0.032 ± 0.025 | 0.020 ± 0.000 | 0.020 ± 0.000 | 0.020 ± 0.000 | 0.020 ± 0.000 | 0.020 ± 0.000 | **0.068 ± 0.060** | 0.020 ± 0.000 | 0.026 ± 0.018 |
| $datasets_all/ecoli2.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/abalone9-18.dat$ | 0.281 ± 0.100 | 0.286 ± 0.091 | 0.263 ± 0.099 | 0.143 ± 0.042 | 0.143 ± 0.042 | 0.125 ± 0.036 | 0.062 ± 0.013 | 0.080 ± 0.036 | **0.342 ± 0.099** | 0.241 ± 0.099 | 0.156 ± 0.056 |
| $datasets_all/yeast-1-2-8-9_vs_7.dat$ | 0.115 ± 0.058 | 0.128 ± 0.078 | 0.103 ± 0.054 | 0.064 ± 0.052 | 0.070 ± 0.052 | 0.070 ± 0.052 | 0.045 ± 0.026 | 0.032 ± 0.000 | **0.256 ± 0.101** | 0.115 ± 0.058 | 0.083 ± 0.063 |
| $datasets_all/winequality-white-3_vs_7.dat$ | 0.179 ± 0.133 | 0.208 ± 0.102 | 0.198 ± 0.073 | 0.140 ± 0.096 | 0.140 ± 0.096 | 0.140 ± 0.096 | 0.061 ± 0.048 | 0.071 ± 0.090 | **0.296 ± 0.185** | 0.228 ± 0.127 | 0.149 ± 0.098 |
| $datasets_all/yeast-2_vs_4.dat$ | 0.593 ± 0.075 | 0.611 ± 0.090 | 0.590 ± 0.087 | 0.631 ± 0.091 | 0.631 ± 0.091 | 0.631 ± 0.091 | 0.275 ± 0.085 | 0.311 ± 0.119 | **0.715 ± 0.055** | 0.684 ± 0.046 | 0.681 ± 0.060 |
| $datasets_all/winequality-red-3_vs_5.dat$ | 0.014 ± 0.000 | 0.014 ± 0.000 | 0.014 ± 0.000 | 0.014 ± 0.000 | 0.014 ± 0.000 | 0.014 ± 0.000 | 0.014 ± 0.000 | 0.014 ± 0.000 | **0.113 ± 0.132** | 0.014 ± 0.000 | 0.014 ± 0.000 |
| $datasets_all/glass2.dat$ | 0.153 ± 0.072 | 0.167 ± 0.108 | 0.155 ± 0.111 | 0.114 ± 0.072 | 0.114 ± 0.072 | 0.114 ± 0.072 | 0.154 ± 0.096 | 0.101 ± 0.043 | **0.320 ± 0.161** | 0.232 ± 0.133 | 0.125 ± 0.104 |
| $datasets_all/yeast-2_vs_8.dat$ | 0.473 ± 0.178 | 0.406 ± 0.200 | 0.406 ± 0.200 | 0.137 ± 0.182 | 0.137 ± 0.182 | 0.137 ± 0.182 | 0.051 ± 0.029 | 0.051 ± 0.029 | **0.510 ± 0.174** | 0.406 ± 0.170 | 0.262 ± 0.201 |
| $datasets_all/glass1.dat$ | 0.703 ± 0.077 | 0.706 ± 0.049 | 0.694 ± 0.046 | 0.666 ± 0.034 | 0.666 ± 0.034 | 0.659 ± 0.038 | 0.675 ± 0.068 | 0.640 ± 0.044 | 0.693 ± 0.043 | **0.708 ± 0.059** | 0.699 ± 0.070 |
| $datasets_all/zoo-3.dat$ | 0.225 ± 0.215 | 0.193 ± 0.214 | 0.193 ± 0.214 | 0.145 ± 0.188 | 0.145 ± 0.188 | 0.145 ± 0.188 | 0.049 ± 0.009 | 0.049 ± 0.009 | **0.254 ± 0.211** | 0.208 ± 0.200 | 0.240 ± 0.243 |
| $datasets_all/glass-0-1-5_vs_2.dat$ | 0.221 ± 0.132 | 0.187 ± 0.131 | 0.198 ± 0.127 | 0.098 ± 0.006 | 0.098 ± 0.006 | 0.098 ± 0.006 | 0.150 ± 0.070 | 0.120 ± 0.043 | **0.302 ± 0.117** | 0.244 ± 0.095 | 0.118 ± 0.043 |
| $datasets_all/abalone-20_vs_8-9-10.dat$ | 0.082 ± 0.079 | 0.082 ± 0.063 | 0.067 ± 0.059 | 0.021 ± 0.023 | 0.021 ± 0.023 | 0.021 ± 0.023 | 0.021 ± 0.023 | 0.014 ± 0.000 | **0.203 ± 0.141** | 0.074 ± 0.082 | 0.052 ± 0.038 |
| $datasets_all/kddcup-buffer_overflow_vs_back.dat$ | 0.987 ± 0.039 | 0.987 ± 0.039 | 0.987 ± 0.039 | 0.895 ± 0.156 | 0.895 ± 0.156 | 0.895 ± 0.156 | 0.882 ± 0.124 | 0.816 ± 0.087 | **1.000 ± 0.000** | **1.000 ± 0.000** | 0.980 ± 0.030 |
| $datasets_all/winequality-white-3-9_vs_5.dat$ | 0.025 ± 0.024 | 0.041 ± 0.052 | 0.041 ± 0.052 | 0.025 ± 0.024 | 0.025 ± 0.024 | 0.017 ± 0.001 | 0.017 ± 0.001 | 0.017 ± 0.001 | **0.174 ± 0.103** | 0.118 ± 0.119 | 0.041 ± 0.036 |
| $datasets_all/vehicle3.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/vehicle1.dat$ | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** | **0.000 ± 0.000** |
| $datasets_all/page-blocks-1-3_vs_4.dat$ | 0.859 ± 0.118 | 0.879 ± 0.099 | 0.879 ± 0.099 | 0.832 ± 0.086 | 0.832 ± 0.086 | 0.832 ± 0.086 | 0.798 ± 0.074 | 0.771 ± 0.109 | **0.892 ± 0.128** | 0.879 ± 0.078 | 0.825 ± 0.125 |
| $datasets_all/ecoli-0-6-7_vs_5.dat$ | 0.517 ± 0.287 | 0.498 ± 0.308 | 0.498 ± 0.308 | 0.445 ± 0.154 | 0.445 ± 0.154 | 0.445 ± 0.154 | 0.218 ± 0.101 | 0.263 ± 0.118 | **0.716 ± 0.125** | 0.690 ± 0.153 | 0.645 ± 0.192 |
| $datasets_all/poker-8-9_vs_5.dat$ | 0.012 ± 0.000 | 0.020 ± 0.025 | 0.020 ± 0.025 | 0.020 ± 0.025 | 0.012 ± 0.000 | 0.012 ± 0.000 | 0.012 ± 0.000 | 0.012 ± 0.000 | **0.197 ± 0.143** | 0.029 ± 0.033 | 0.012 ± 0.000 |
| $datasets_all/yeast-0-3-5-9_vs_7-8.dat$ | 0.249 ± 0.045 | 0.252 ± 0.060 | 0.249 ± 0.055 | 0.185 ± 0.060 | 0.185 ± 0.060 | 0.188 ± 0.049 | 0.109 ± 0.023 | 0.110 ± 0.023 | **0.382 ± 0.087** | 0.248 ± 0.031 | 0.249 ± 0.066 |