

Test accuracy comparison on fourclass

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6880 | 0.7053 | 0.9404 | 0.7111 | 0.7076 | 10% |
| 10% | 0.6659 | 0.6914 | 0.8735 | 0.6933 | 0.7186 | 25% |
| 15% | 0.6670 | 0.6834 | 0.8387 | 0.7076 | 0.6890 | 15% |
| 20% | 0.6821 | 0.7042 | 0.7703 | 0.7007 | 0.7010 | 30% |
| 25% | 0.6219 | 0.6195 | 0.7471 | 0.6848 | 0.6949 | 30% |
| 30% | 0.6416 | 0.6741 | 0.6556 | 0.6891 | 0.6857 | 25% |
| 40% | 0.5444 | 0.5292 | 0.5843 | 0.6174 | 0.5951 | 40% |

Test accuracy comparison on diabetes

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6589 | 0.6576 | 0.7027 | 0.6523 | 0.6576 | 5% |
| 10% | 0.6588 | 0.6588 | 0.6894 | 0.6537 | 0.6588 | 5% |
| 15% | 0.6507 | 0.6576 | 0.6586 | 0.6511 | 0.6654 | 10% |
| 20% | 0.6601 | 0.6771 | 0.6568 | 0.6549 | 0.6602 | 35% |
| 25% | 0.6117 | 0.6758 | 0.5800 | 0.6537 | 0.6771 | 20% |
| 30% | 0.6079 | 0.6522 | 0.5915 | 0.6523 | 0.6653 | 5% |
| 40% | 0.5245 | 0.6003 | 0.5801 | 0.6524 | 0.6613 | 40% |

Test accuracy comparison on breastcancer

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.8562 | 0.8418 | 0.9064 | 0.8229 | 0.8433 | 5% |
| 10% | 0.8448 | 0.1888 | 0.8752 | 0.8287 | 0.8463 | 10% |
| 15% | 0.8461 | 0.8449 | 0.7761 | 0.8287 | 0.8492 | 15% |
| 20% | 0.8231 | 0.8286 | 0.7605 | 0.8155 | 0.8357 | 20% |
| 25% | 0.8199 | 0.8204 | 0.6972 | 0.8170 | 0.8213 | 25% |
| 30% | 0.8229 | 0.8243 | 0.6715 | 0.8053 | 0.8259 | 25% |
| 40% | 0.7008 | 0.7008 | 0.6220 | 0.7613 | 0.8155 | 15% |

Test accuracy comparison on creditApproval

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6855 | 0.6869 | 0.8055 | 0.6855 | 0.6898 | 20% |
| 10% | 0.6739 | 0.6739 | 0.7763 | 0.6812 | 0.6855 | 20% |
| 15% | 0.6043 | 0.6101 | 0.7364 | 0.6855 | 0.6841 | 30% |
| 20% | 0.6608 | 0.6681 | 0.6864 | 0.6840 | 0.6898 | 20% |
| 25% | 0.6464 | 0.6667 | 0.6672 | 0.6420 | 0.6683 | 5% |
| 30% | 0.5319 | 0.5319 | 0.6364 | 0.6144 | 0.6478 | 40% |
| 40% | 0.5812 | 0.5812 | 0.5800 | 0.5913 | 0.5812 | 10% |

Test accuracy comparison on sonar

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.4954 | 0.4954 | 0.8121 | 0.4954 | 0.5003 | 15% |
| 10% | 0.4761 | 0.4761 | 0.7661 | 0.4906 | 0.4808 | 5% |
| 15% | 0.4998 | 0.4998 | 0.6848 | 0.4998 | 0.4998 | 5% |
| 20% | 0.5144 | 0.5339 | 0.6606 | 0.4620 | 0.5437 | 10% |
| 25% | 0.5151 | 0.5247 | 0.5939 | 0.5192 | 0.5103 | 15% |
| 30% | 0.5144 | 0.5144 | 0.6303 | 0.4949 | 0.5192 | 5% |
| 40% | 0.5003 | 0.5293 | 0.5758 | 0.5287 | 0.5293 | 5% |

Test accuracy comparison on votes

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.8805 | 0.8920 | 0.8957 | 0.8943 | 0.9011 | 5% |

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|-----|--------|--------|--------|--------|--------|-----|
| 10% | 0.8874 | 0.8897 | 0.8812 | 0.8904 | 0.8912 | 10% |
| 15% | 0.8529 | 0.8552 | 0.8029 | 0.8597 | 0.8851 | 25% |
| 20% | 0.8459 | 0.8299 | 0.7797 | 0.8644 | 0.8713 | 30% |
| 25% | 0.7793 | 0.7793 | 0.6927 | 0.8675 | 0.8689 | 30% |
| 30% | 0.7241 | 0.6920 | 0.6870 | 0.8321 | 0.8207 | 30% |
| 40% | 0.6046 | 0.5931 | 0.6348 | 0.7425 | 0.6506 | 35% |

Test accuracy comparison on mushrooms

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.9930 | 0.9878 | 0.9447 | 0.9990 | 0.9999 | 5% |
| 10% | 0.9726 | 0.9111 | 0.8825 | 0.9959 | 0.9993 | 10% |
| 15% | 0.9372 | 0.7418 | 0.8157 | 0.9958 | 0.9999 | 20% |
| 20% | 0.8913 | 0.5742 | 0.7462 | 0.9933 | 0.9989 | 30% |
| 25% | 0.8560 | 0.4607 | 0.7069 | 0.9920 | 0.9969 | 45% |
| 30% | 0.7906 | 0.4015 | 0.6607 | 0.9904 | 0.9838 | 50% |
| 40% | 0.6556 | 0.4054 | 0.5750 | 0.9444 | 0.7104 | 50% |

Test accuracy comparison on splice

Based on KNN classifier.

| NOISE RATE | KNN | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6860 | 0.6860 | 0.6625 | 0.6609 | 0.6910 | 15% |
| 10% | 0.6870 | 0.6870 | 0.6650 | 0.6930 | 0.7010 | 10% |
| 15% | 0.6700 | 0.6670 | 0.6562 | 0.6690 | 0.6930 | 20% |

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|-----|--------|--------|--------|--------|--------|-----|
| 20% | 0.6460 | 0.6400 | 0.6038 | 0.6510 | 0.6550 | 40% |
| 25% | 0.6110 | 0.6090 | 0.5600 | 0.6220 | 0.6330 | 20% |
| 30% | 0.5960 | 0.5930 | 0.5612 | 0.5990 | 0.6120 | 40% |
| 40% | 0.5130 | 0.5160 | 0.5363 | 0.5140 | 0.5550 | 40% |

Test accuracy comparison on fourclass

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.7134 | 0.7204 | 0.8749 | 0.7111 | 0.7228 | 25% |
| 10% | 0.6580 | 0.7112 | 0.8269 | 0.5870 | 0.7239 | 10% |
| 15% | 0.5986 | 0.6472 | 0.7746 | 0.5742 | 0.7239 | 40% |
| 20% | 0.6287 | 0.7006 | 0.7238 | 0.4722 | 0.7249 | 30% |
| 25% | 0.5720 | 0.6437 | 0.6701 | 0.6564 | 0.7076 | 30% |
| 30% | 0.5754 | 0.6147 | 0.6497 | 0.6565 | 0.6786 | 30% |
| 40% | 0.5531 | 0.5996 | 0.5828 | 0.5220 | 0.6253 | 35% |

Test accuracy comparison on diabetes

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6222 | 0.6732 | 0.6929 | 0.6693 | 0.6718 | 15% |
| 10% | 0.4961 | 0.6693 | 0.6780 | 0.6213 | 0.6914 | 10% |
| 15% | 0.4714 | 0.6043 | 0.6586 | 0.6667 | 0.6771 | 20% |
| 20% | 0.4571 | 0.4779 | 0.5816 | 0.6719 | 0.5494 | 50% |
| 25% | 0.4183 | 0.3126 | 0.5816 | 0.6978 | 0.5287 | 20% |
| 30% | 0.4540 | 0.4540 | 0.5278 | 0.6823 | 0.5168 | 35% |
| 40% | 0.4892 | 0.3957 | 0.5326 | 0.5272 | 0.4389 | 10% |

Test accuracy comparison on breastcancer

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.5680 | 0.8345 | 0.8642 | 0.8535 | 0.8931 | 15% |
| 10% | 0.5694 | 0.8594 | 0.8147 | 0.8375 | 0.9032 | 30% |
| 15% | 0.5780 | 0.5869 | 0.7138 | 0.8695 | 0.8872 | 20% |
| 20% | 0.7053 | 0.6978 | 0.6899 | 0.8476 | 0.8535 | 25% |
| 25% | 0.7051 | 0.7037 | 0.6569 | 0.8536 | 0.8360 | 40% |
| 30% | 0.4840 | 0.5840 | 0.6257 | 0.8623 | 0.8242 | 45% |

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|-----|--------|--------|--------|--------|--------|-----|
| 40% | 0.3620 | 0.4614 | 0.5541 | 0.7475 | 0.8139 | 45% |
|-----|--------|--------|--------|--------|--------|-----|

Test accuracy comparison on creditApproval

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.4623 | 0.5232 | 0.8036 | 0.5406 | 0.5536 | 15% |
| 10% | 0.4884 | 0.4232 | 0.7109 | 0.5145 | 0.5551 | 35% |
| 15% | 0.4318 | 0.4768 | 0.6691 | 0.5319 | 0.5623 | 40% |
| 20% | 0.4986 | 0.5014 | 0.6455 | 0.5232 | 0.5710 | 30% |
| 25% | 0.4797 | 0.4594 | 0.6600 | 0.5580 | 0.5217 | 35% |
| 30% | 0.4739 | 0.5217 | 0.6200 | 0.4899 | 0.5986 | 35% |
| 40% | 0.5000 | 0.4768 | 0.5691 | 0.4812 | 0.5899 | 45% |

Test accuracy comparison on snoar

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.5049 | 0.4836 | 0.7636 | 0.5120 | 0.5164 | 5% |
| 10% | 0.4661 | 0.4275 | 0.7152 | 0.4904 | 0.4998 | 5% |
| 15% | 0.4477 | 0.4666 | 0.7455 | 0.4854 | 0.4808 | 10% |
| 20% | 0.5146 | 0.5382 | 0.6667 | 0.4616 | 0.5725 | 15% |
| 25% | 0.4465 | 0.4517 | 0.6606 | 0.4754 | 0.5386 | 30% |
| 30% | 0.4811 | 0.5149 | 0.6485 | 0.5437 | 0.5675 | 30% |
| 40% | 0.4466 | 0.5293 | 0.6061 | 0.5384 | 0.5815 | 40% |

Test accuracy comparison on votes

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|---------------|---------------|--------------|
| 5% | 0.7448 | 0.8460 | 0.8928 | 0.8943 | 0.9448 | 35% |
| 10% | 0.5931 | 0.7448 | 0.8261 | 0.7471 | 0.9149 | 30% |
| 15% | 0.5011 | 0.6161 | 0.7681 | 0.8253 | 0.8621 | 30% |
| 20% | 0.4943 | 0.5770 | 0.7043 | 0.7333 | 0.7080 | 45% |
| 25% | 0.4897 | 0.6138 | 0.6435 | 0.6575 | 0.7310 | 35% |
| 30% | 0.3747 | 0.4345 | 0.6261 | 0.6575 | 0.6230 | 50% |
| 40% | 0.4276 | 0.5195 | 0.5884 | 0.4667 | 0.6276 | 30% |

Test accuracy comparison on mushrooms

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|---------------|---------------|--------------|
| 5% | 0.9193 | 0.9807 | 0.8832 | 0.9905 | 0.9948 | 5% |
| 10% | 0.8614 | 0.9239 | 0.7879 | 0.9947 | 0.9994 | 15% |
| 15% | 0.8143 | 0.8596 | 0.7229 | 0.9889 | 0.9969 | 20% |
| 20% | 0.7614 | 0.8085 | 0.6663 | 0.9916 | 0.9996 | 40% |
| 25% | 0.7226 | 0.7520 | 0.6350 | 0.9871 | 0.9790 | 40% |
| 30% | 0.6739 | 0.6923 | 0.5921 | 0.9830 | 0.9474 | 50% |
| 40% | 0.5772 | 0.5851 | 0.5394 | 0.9517 | 0.7120 | 45% |

Test accuracy comparison on splice

Based on DT classifier.

| NOISE RATE | DT | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.4810 | 0.5050 | 0.8338 | 0.5010 | 0.6030 | 40% |
| 10% | 0.4800 | 0.4690 | 0.7513 | 0.5070 | 0.5740 | 35% |
| 15% | 0.4940 | 0.4850 | 0.7038 | 0.5230 | 0.5420 | 35% |
| 20% | 0.4620 | 0.5070 | 0.6750 | 0.4900 | 0.5480 | 35% |
| 25% | 0.5120 | 0.5230 | 0.6050 | 0.5000 | 0.5730 | 45% |
| 30% | 0.5070 | 0.5290 | 0.5825 | 0.5200 | 0.5430 | 30% |
| 40% | 0.4880 | 0.4910 | 0.5475 | 0.5140 | 0.5420 | 30% |

Test accuracy comparison on fourclass

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.7807 | 0.7842 | 0.7559 | 0.7842 | 0.7830 | 5% |
| 10% | 0.7738 | 0.7784 | 0.7268 | 0.7807 | 0.7819 | 30% |
| 15% | 0.7784 | 0.7819 | 0.6934 | 0.7772 | 0.7819 | 10% |
| 20% | 0.7807 | 0.7841 | 0.6541 | 0.7761 | 0.7865 | 25% |
| 25% | 0.7772 | 0.7773 | 0.6396 | 0.7796 | 0.7819 | 30% |
| 30% | 0.7761 | 0.7761 | 0.6164 | 0.7657 | 0.7830 | 15% |
| 40% | 0.7587 | 0.7610 | 0.5713 | 0.7436 | 0.7564 | 5% |

Test accuracy comparison on diabetes

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6511 | 0.6511 | 0.7419 | 0.6511 | 0.6511 | 5% |
| 10% | 0.6511 | 0.6511 | 0.7093 | 0.6511 | 0.6524 | 25% |
| 15% | 0.6511 | 0.6511 | 0.7125 | 0.6511 | 0.6524 | 20% |
| 20% | 0.6524 | 0.6524 | 0.6520 | 0.6511 | 0.6537 | 20% |
| 25% | 0.6550 | 0.6550 | 0.6128 | 0.6511 | 0.6576 | 35% |
| 30% | 0.6498 | 0.6498 | 0.6177 | 0.6511 | 0.6628 | 40% |
| 40% | 0.6471 | 0.6446 | 0.5524 | 0.6498 | 0.6615 | 10% |

Test accuracy comparison on breastcancer

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.7380 | 0.7453 | 0.9229 | 0.7658 | 0.7819 | 10% |
| 10% | 0.7731 | 0.7657 | 0.8697 | 0.7760 | 0.7775 | 30% |
| 15% | 0.7657 | 0.7614 | 0.8404 | 0.7687 | 0.7878 | 35% |

| | | | | | | |
|-----|--------|--------|--------|--------|--------|-----|
| 20% | 0.7644 | 0.7453 | 0.7761 | 0.7628 | 0.7891 | 45% |
| 25% | 0.7628 | 0.7525 | 0.7321 | 0.7614 | 0.7893 | 50% |
| 30% | 0.7893 | 0.7805 | 0.7119 | 0.7366 | 0.8126 | 35% |
| 40% | 0.7440 | 0.7440 | 0.6092 | 0.7601 | 0.7616 | 15% |

Test accuracy comparison on creditApproval

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.6725 | 0.6841 | 0.8164 | 0.7014 | 0.6971 | 20% |
| 10% | 0.6812 | 0.6768 | 0.7745 | 0.6797 | 0.6841 | 15% |
| 15% | 0.6681 | 0.6913 | 0.7127 | 0.6754 | 0.6783 | 25% |
| 20% | 0.6899 | 0.6870 | 0.7055 | 0.6667 | 0.6667 | 30% |
| 25% | 0.6725 | 0.6406 | 0.6836 | 0.6188 | 0.6667 | 5% |
| 30% | 0.6797 | 0.6768 | 0.6619 | 0.6725 | 0.6783 | 10% |
| 40% | 0.5145 | 0.5420 | 0.6091 | 0.5217 | 0.5696 | 35% |

Test accuracy comparison on sonar

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.4762 | 0.4810 | 0.7879 | 0.4761 | 0.4858 | 10% |
| 10% | 0.4713 | 0.4762 | 0.7818 | 0.4618 | 0.4809 | 5% |
| 15% | 0.4856 | 0.4761 | 0.7273 | 0.4761 | 0.4904 | 40% |
| 20% | 0.5635 | 0.5538 | 0.6788 | 0.5149 | 0.5346 | 15% |
| 25% | 0.5391 | 0.5635 | 0.6364 | 0.5250 | 0.5393 | 10% |

| | | | | | | |
|-----|--------|--------|--------|--------|--------|-----|
| 30% | 0.5782 | 0.5732 | 0.6242 | 0.5590 | 0.5927 | 5% |
| 40% | 0.6059 | 0.5914 | 0.5758 | 0.5336 | 0.6153 | 35% |

Test accuracy comparison on votes

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.9264 | 0.9264 | 0.9159 | 0.9057 | 0.9274 | 5% |
| 10% | 0.9218 | 0.9218 | 0.8724 | 0.9218 | 0.9241 | 15% |
| 15% | 0.9287 | 0.9287 | 0.8058 | 0.9310 | 0.9333 | 10% |
| 20% | 0.9195 | 0.9241 | 0.7710 | 0.9264 | 0.9264 | 30% |
| 25% | 0.9103 | 0.9195 | 0.7246 | 0.9126 | 0.9172 | 10% |
| 30% | 0.9034 | 0.9011 | 0.6928 | 0.9195 | 0.9218 | 25% |
| 40% | 0.7471 | 0.7471 | 0.6551 | 0.8437 | 0.8207 | 50% |

Test accuracy comparison on mushrooms

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.9961 | 0.9991 | 0.9480 | 0.9986 | 0.9994 | 5% |
| 10% | 0.8965 | 0.9810 | 0.9033 | 0.9918 | 0.9994 | 10% |
| 15% | 0.8786 | 0.9511 | 0.8453 | 0.9834 | 0.9995 | 15% |
| 20% | 0.8145 | 0.8039 | 0.7986 | 0.9737 | 0.9995 | 25% |
| 25% | 0.7788 | 0.7324 | 0.7549 | 0.9487 | 0.9978 | 40% |
| 30% | 0.8514 | 0.8170 | 0.6924 | 0.9196 | 0.9893 | 50% |
| 40% | 0.7437 | 0.7021 | 0.6122 | 0.8196 | 0.8222 | 20% |

Test accuracy comparison on splice

Based on LR classifier.

| NOISE RATE | LR | RD | CRF | mCRF | CFE | Best r value |
|------------|--------|--------|--------|--------|--------|--------------|
| 5% | 0.7780 | 0.7830 | 0.7763 | 0.7780 | 0.7810 | 10% |
| 10% | 0.7970 | 0.7980 | 0.7363 | 0.7970 | 0.8000 | 20% |
| 15% | 0.7550 | 0.7610 | 0.7000 | 0.7490 | 0.7710 | 15% |
| 20% | 0.7250 | 0.7260 | 0.6560 | 0.7090 | 0.7440 | 20% |
| 25% | 0.7390 | 0.7440 | 0.6250 | 0.7460 | 0.7480 | 5% |
| 30% | 0.6960 | 0.6960 | 0.6288 | 0.7070 | 0.6970 | 5% |
| 40% | 0.5910 | 0.6040 | 0.5438 | 0.5920 | 0.5860 | 10% |

