Feature Descriptor: Haralick

1. Feature Selection: CFS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.513 | 0.45 | 0.45 | 0.456 | 0.453 | 0.448 | 0 |
| J48 binary tree | 0.555 | 0.565 | 0.565 | 0.564 | 0.565 | 0.565 | 0 |
| AODE | 0.689 | 0.611 | 0.611 | 0.614 | 0.614 | 0.61 | 0 |
| Bayes network | 0.633 | 0.58 | 0.58 | 0.589 | 0.59 | 0.575 | 0 |
| Naïve bay | 0.633 | 0.565 | 0.565 | 0.574 | 0.574 | 0.56 | 0 |
| SVM | 0.553 | 0.557 | 0.557 | 0.548 | 0.556 | 0.55 | 0 |
| Logistic | 0.614 | 0.542 | 0.542 | 0.537 | 0.541 | 0.54 | 0 |
| SMO | 0.582 | 0.58 | 0.58 | 0.583 | 0.583 | 0.58 | 0 |
| Muti layer | 0.629 | 0.55 | 0.55 | 0.552 | 0.552 | 0.549 | 0.88 |

1. Feature Selection: Chi-Square

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.498 | 0.481 | 0.481 | 0.485 | 0.484 | 0.479 | 0 |
| J48 binary tree | 0.466 | 0.443 | 0.443 | 0.444 | 0.444 | 0.443 | 0 |
| AODE | 0.564 | 0.542 | 0.542 | 0.544 | 0.544 | 0.5442 | 0 |
| Bayes network | 0.543 | 0.458 | 0.458 | 0.457 | 0.458 | 0.458 | 0 |
| Naïve bay | 0.54 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SVM | 0.51 | 0.527 | 0.527 | 0.494 | 0.539 | 0.416 | 0 |
| Logistic | 0.548 | 0.557 | 0.557 | 0.562 | 0.561 | 0.556 | 0 |
| SMO | 0.535 | 0.534 | 0.534 | 0.535 | 0.535 | 0.535 | 0.05 |
| Muti layer | 0.548 | 0.534 | 0.534 | 0.536 | 0.536 | 0.534 | 8.6 |

1. Feature Selection: Gain Ratio

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.498 | 0.481 | 0.481 | 0.485 | 0.484 | 0.479 | 0 |
| J48 binary tree | 0.466 | 0.427 | 0.427 | 0.429 | 0.429 | 0.427 | 0 |
| AODE | 0.564 | 0.542 | 0.542 | 0.544 | 0.544 | 0.5442 | 0 |
| Bayes network | 0.543 | 0.458 | 0.458 | 0.457 | 0.458 | 0.458 | 0 |
| Naïve bay | 0.54 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SVM | 0.51 | 0.527 | 0.527 | 0.494 | 0.539 | 0.416 | 0 |
| Logistic | 0.548 | 0.557 | 0.557 | 0.562 | 0.561 | 0.556 | 0 |
| SMO | 0.527 | 0.527 | 0.527 | 0.528 | 0.528 | 0.527 | 0.05 |
| Muti layer | 0.549 | 0.542 | 0.542 | 0.543 | 0.543 | 0.542 | 8.37 |

1. Feature Selection: Information Gain

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.498 | 0.481 | 0.481 | 0.485 | 0.484 | 0.479 | 0 |
| J48 binary tree | 0.466 | 0.443 | 0.443 | 0.444 | 0.444 | 0.443 | 0 |
| AODE | 0.564 | 0.542 | 0.542 | 0.544 | 0.544 | 0.5442 | 0 |
| Bayes network | 0.543 | 0.458 | 0.458 | 0.457 | 0.458 | 0.458 | 0 |
| Naïve bay | 0.54 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SVM | 0.51 | 0.527 | 0.527 | 0.494 | 0.539 | 0.416 | 0 |
| Logistic | 0.548 | 0.557 | 0.557 | 0.562 | 0.561 | 0.556 | 0 |
| SMO | 0.535 | 0.534 | 0.534 | 0.535 | 0.535 | 0.535 | 0.05 |
| Muti layer | 0.536 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 8.44 |

1. Feature Selection: Relief

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.498 | 0.481 | 0.481 | 0.485 | 0.484 | 0.479 | 0 |
| J48 binary tree | 0.457 | 0.443 | 0.443 | 0.442 | 0.443 | 0.443 | 0 |
| AODE | 0.564 | 0.542 | 0.542 | 0.544 | 0.544 | 0.5442 | 0 |
| Bayes network | 0.543 | 0.458 | 0.458 | 0.457 | 0.458 | 0.458 | 0 |
| Naïve bay | 0.54 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SVM | 0.51 | 0.527 | 0.527 | 0.494 | 0.539 | 0.416 | 0 |
| Logistic | 0.548 | 0.557 | 0.557 | 0.562 | 0.561 | 0.556 | 0 |
| SMO | 0.535 | 0.534 | 0.534 | 0.535 | 0.535 | 0.535 | 0.05 |
| Muti layer | 0.56 | 0.527 | 0.527 | 0.523 | 0.527 | 0.527 | 8.61 |