Feature Descriptor: Haralick

1. Feature Selection: CFS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.636 | 0.534 | 0.534 | 0.542 | 0.54 | 0.53 | 0 |
| J48 binary tree | 0.547 | 0.573 | 0.573 | 0.567 | 0.572 | 0.57 | 0 |
| AODE | 0.694 | 0.664 | 0.664 | 0.67 | 0.672 | 0.662 | 0 |
| Bayes network | 0.597 | 0.573 | 0.573 | 0.577 | 0.577 | 0.571 | 0 |
| Naïve bay | 0.593 | 0.55 | 0.55 | 0.555 | 0.554 | 0.548 | 0 |
| SVM | 0.521 | 0.534 | 0.534 | 0.507 | 0.543 | 0.463 | 0 |
| Logistic | 0.59 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0 |
| SMO | 0.574 | 0.573 | 0.573 | 0.576 | 0.576 | 0.572 | 0 |
| Muti layer | 0.58 | 0.641 | 0.641 | 0.643 | 0.643 | 0.641 | 0.54 |

1. Feature Selection: Chi-Square

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.661 | 0.588 | 0.588 | 0.595 | 0.595 | 0.585 | 0 |
| J48 binary tree | 0.411 | 0.443 | 0.443 | 0.441 | 0.442 | 0.443 | 0 |
| AODE | 0.505 | 0.473 | 0.473 | 0.478 | 0.476 | 0.471 | 0 |
| Bayes network | 0.451 | 0.45 | 0.45 | 0.448 | 0.45 | 0.45 | 0 |
| Naïve bay | 0.441 | 0.458 | 0.458 | 0.456 | 0.458 | 0.458 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0 |
| Logistic | 0.498 | 0.55 | 0.55 | 0.545 | 0.549 | 0.548 | 0 |
| SMO | 0.442 | 0.443 | 0.443 | 0.442 | 0.443 | 0.443 | 0.05 |
| Muti layer | 0.465 | 0.45 | 0.45 | 0.45 | 0.451 | 0.451 | 8.02 |

1. Feature Selection: Gain Ratio

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.671 | 0.588 | 0.588 | 0.595 | 0.595 | 0.585 | 0 |
| J48 binary tree | 0.423 | 0.458 | 0.458 | 0.455 | 0.457 | 0.457 | 0 |
| AODE | 0.505 | 0.473 | 0.473 | 0.478 | 0.476 | 0.471 | 0 |
| Bayes network | 0.451 | 0.45 | 0.45 | 0.448 | 0.45 | 0.45 | 0 |
| Naïve bay | 0.441 | 0.458 | 0.458 | 0.456 | 0.458 | 0.458 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0 |
| Logistic | 0.498 | 0.55 | 0.55 | 0.545 | 0.549 | 0.548 | 0 |
| SMO | 0.442 | 0.443 | 0.443 | 0.442 | 0.443 | 0.443 | 0.05 |
| Muti layer | 0.451 | 0.458 | 0.458 | 0.459 | 0.458 | 0.458 | 8.58 |

1. Feature Selection: Information Gain

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.661 | 0.588 | 0.588 | 0.595 | 0.595 | 0.585 | 0 |
| J48 binary tree | 0.419 | 0.45 | 0.45 | 0.446 | 0.449 | 0.449 | 0 |
| AODE | 0.505 | 0.473 | 0.473 | 0.578 | 0.476 | 0.471 | 0 |
| Bayes network | 0.451 | 0.45 | 0.45 | 0.448 | 0.45 | 0.45 | 0 |
| Naïve bay | 0.441 | 0.458 | 0.458 | 0.456 | 0.458 | 0.458 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0 |
| Logistic | 0.498 | 0.55 | 0.55 | 0.545 | 0.549 | 0.548 | 0 |
| SMO | 0.434 | 0.435 | 0.435 | 0.433 | 0.435 | 0.435 | 0.05 |
| Muti layer | 0.46 | 0.458 | 0.458 | 0.458 | 0.458 | 0.458 | 7.82 |

1. Feature Selection: Relief

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.661 | 0.588 | 0.588 | 0.595 | 0.595 | 0.585 | 0 |
| J48 binary tree | 0.431 | 0.45 | 0.45 | 0.449 | 0.45 | 0.45 | 0 |
| AODE | 0.505 | 0.473 | 0.473 | 0.578 | 0.476 | 0.471 | 0 |
| Bayes network | 0.451 | 0.45 | 0.45 | 0.448 | 0.45 | 0.45 | 0 |
| Naïve bay | 0.441 | 0.458 | 0.458 | 0.456 | 0.458 | 0.458 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0 |
| Logistic | 0.498 | 0.55 | 0.55 | 0.545 | 0.549 | 0.548 | 0 |
| SMO | 0.442 | 0.443 | 0.443 | 0.442 | 0.443 | 0.443 | 0.05 |
| Muti layer | 0.456 | 0.473 | 0.473 | 0.473 | 0.474 | 0.473 | 7.82 |