Feature Descriptor: Haralick

1. Feature Selection: CFS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.525 | 0.473 | 0.473 | 0.48 | 0.477 | 0.469 | 0 |
| J48 binary tree | 0.641 | 0.588 | 0.588 | 0.612 | 0.611 | 0.574 | 0 |
| AODE | 0.557 | 0.542 | 0.542 | 0.545 | 0.545 | 0.541 | 0 |
| Bayes network | 0.553 | 0.534 | 0.534 | 0.548 | 0.548 | 0.52 | 0 |
| Naïve bay | 0.556 | 0.55 | 0.55 | 0.563 | 0.565 | 0.536 | 0 |
| SVM | 0.484 | 0.489 | 0.489 | 0.479 | 0.484 | 0.481 | 0 |
| Logistic | 0.539 | 0.519 | 0.519 | 0.521 | 0.521 | 0.519 | 0 |
| SMO | 0.545 | 0.542 | 0.542 | 0.549 | 0.548 | 0.539 | 0 |
| Muti layer | 0.617 | 0.611 | 0.611 | 0.616 | 0.616 | 0.609 | 1.46 |

1. Feature Selection: Chi-Square

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.541 | 0.504 | 0.504 | 0.513 | 0.51 | 0.496 | 0 |
| J48 binary tree | 0.556 | 0.55 | 0.55 | 0.555 | 0.554 | 0.548 | 0 |
| AODE | 0.537 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Bayes network | 0.548 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Naïve bay | 0.55 | 0.534 | 0.534 | 0.538 | 0.537 | 0.533 | 0 |
| SVM | 0.478 | 0.496 | 0.496 | 0.46 | 0.264 | 0.344 | 0 |
| Logistic | 0.479 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SMO | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.05 |
| Muti layer | 0.567 | 0.557 | 0.557 | 0.556 | 0.557 | 0.557 | 11.57 |

1. Feature Selection: Gain Ratio

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.541 | 0.504 | 0.504 | 0.513 | 0.51 | 0.496 | 0 |
| J48 binary tree | 0.556 | 0.55 | 0.55 | 0.555 | 0.554 | 0.548 | 0 |
| AODE | 0.537 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Bayes network | 0.548 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Naïve bay | 0.55 | 0.534 | 0.534 | 0.538 | 0.537 | 0.533 | 0 |
| SVM | 0.478 | 0.496 | 0.496 | 0.46 | 0.264 | 0.344 | 0 |
| Logistic | 0.479 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SMO | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.05 |
| Muti layer | 0.544 | 0.55 | 0.55 | 0.548 | 0.549 | 0.549 | 9.79 |

1. Feature Selection: Information Gain

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.541 | 0.504 | 0.504 | 0.513 | 0.51 | 0.496 | 0 |
| J48 binary tree | 0.556 | 0.55 | 0.55 | 0.555 | 0.554 | 0.548 | 0 |
| AODE | 0.537 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Bayes network | 0.548 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Naïve bay | 0.55 | 0.534 | 0.534 | 0.538 | 0.537 | 0.533 | 0 |
| SVM | 0.478 | 0.496 | 0.496 | 0.46 | 0.264 | 0.344 | 0 |
| Logistic | 0.479 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SMO | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.05 |
| Muti layer | 0.544 | 0.55 | 0.55 | 0.548 | 0.549 | 0.549 | 9.34 |

1. Feature Selection: Relief

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.541 | 0.504 | 0.504 | 0.513 | 0.51 | 0.496 | 0 |
| J48 binary tree | 0.588 | 0.565 | 0.565 | 0.568 | 0.567 | 0.565 | 0 |
| AODE | 0.537 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Bayes network | 0.548 | 0.527 | 0.527 | 0.53 | 0.529 | 0.526 | 0 |
| Naïve bay | 0.55 | 0.534 | 0.534 | 0.538 | 0.537 | 0.533 | 0 |
| SVM | 0.478 | 0.496 | 0.496 | 0.46 | 0.264 | 0.344 | 0 |
| Logistic | 0.479 | 0.466 | 0.466 | 0.465 | 0.466 | 0.466 | 0 |
| SMO | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.489 | 0.05 |
| Muti layer | 0.56 | 0.542 | 0.542 | 0.542 | 0.542 | 0.542 | 9.79 |