Feature Descriptor: Haralick

1. Feature Selection: CFS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.672 | 0.603 | 0.603 | 0.605 | 0.605 | 0.603 | 0 |
| J48 binary tree | 0.716 | 0.718 | 0.718 | 0.725 | 0.732 | 0.715 | 0 |
| AODE | 0.716 | 0.672 | 0.672 | 0.68 | 0.684 | 0.669 | 0 |
| Bayes network | 0.695 | 0.641 | 0.641 | 0.654 | 0.666 | 0.632 | 0 |
| Naïve bay | 0.689 | 0.649 | 0.649 | 0.663 | 0.682 | 0.637 | 0 |
| SVM | 0.546 | 0.557 | 0.557 | 0.535 | 0.569 | 0.515 | 0 |
| Logistic | 0.676 | 0.634 | 0.634 | 0.635 | 0.635 | 0.634 | 0 |
| SMO | 0.667 | 0.664 | 0.664 | 0.669 | 0.67 | 0.663 | 0 |
| Muti layer | 0.753 | 0.679 | 0.679 | 0.676 | 0.679 | 0.679 | 1.28 |

1. Feature Selection: Chi-Square

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.611 | 0.595 | 0.595 | 0.604 | 0.606 | 0.591 | 0 |
| J48 binary tree | 0.611 | 0.588 | 0.588 | 0.595 | 0.595 | 0.585 | 0 |
| AODE | 0.582 | 0.58 | 0.58 | 0.583 | 0.583 | 0.58 | 0 |
| Bayes network | 0.621 | 0.649 | 0.649 | 0.656 | 0.659 | 0.646 | 0 |
| Naïve bay | 0.607 | 0.618 | 0.618 | 0.628 | 0.632 | 0.613 | 0 |
| SVM | 0.471 | 0.489 | 0.489 | 0.453 | 0.262 | 0.341 | 0 |
| Logistic | 0.659 | 0.634 | 0.636 | 0.636 | 0.636 | 0.634 | 0 |
| SMO | 0.565 | 0.565 | 0.565 | 0.565 | 0.565 | 0.565 | 0.05 |
| Muti layer | 0.652 | 0.603 | 0.603 | 0.607 | 0.606 | 0.602 | 8.88 |

1. Feature Selection: Gain Ratio

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.611 | 0.595 | 0.595 | 0.604 | 0.606 | 0.591 | 0 |
| J48 binary tree | 0.612 | 0.595 | 0.595 | 0.603 | 0.604 | 0.592 | 0 |
| AODE | 0.582 | 0.58 | 0.58 | 0.583 | 0.583 | 0.58 | 0 |
| Bayes network | 0.621 | 0.649 | 0.649 | 0.656 | 0.659 | 0.646 | 0 |
| Naïve bay | 0.607 | 0.618 | 0.618 | 0.628 | 0.632 | 0.613 | 0 |
| SVM | 0.471 | 0.489 | 0.489 | 0.453 | 0.262 | 0.341 | 0 |
| Logistic | 0.659 | 0.634 | 0.636 | 0.636 | 0.636 | 0.633 | 0 |
| SMO | 0.558 | 0.557 | 0.557 | 0.558 | 0.558 | 0.557 | 0.05 |
| Muti layer | 0.632 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 8.81 |

1. Feature Selection: Information Gain

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.611 | 0.595 | 0.595 | 0.604 | 0.606 | 0.591 | 0 |
| J48 binary tree | 0.612 | 0.595 | 0.595 | 0.603 | 0.604 | 0.592 | 0 |
| AODE | 0.582 | 0.58 | 0.58 | 0.583 | 0.583 | 0.58 | 0 |
| Bayes network | 0.621 | 0.649 | 0.649 | 0.656 | 0.659 | 0.646 | 0 |
| Naïve bay | 0.607 | 0.618 | 0.618 | 0.628 | 0.632 | 0.613 | 0 |
| SVM | 0.471 | 0.489 | 0.489 | 0.453 | 0.262 | 0.341 | 0 |
| Logistic | 0.659 | 0.634 | 0.634 | 0.636 | 0.636 | 0.633 | 0 |
| SMO | 0.565 | 0.565 | 0.565 | 0.565 | 0.565 | 0.565 | 0.05 |
| Muti layer | 0.644 | 0.618 | 0.618 | 0.617 | 0.618 | 0.618 | 8.73 |

1. Feature Selection: Relief

K=14

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.602 | 0.588 | 0.588 | 0.596 | 0.597 | 0.584 | 0 |
| J48 binary tree | 0.585 | 0.565 | 0.565 | 0.57 | 0.57 | 0.563 | 0 |
| AODE | 0.582 | 0.58 | 0.58 | 0.583 | 0.583 | 0.58 | 0 |
| Bayes network | 0.621 | 0.649 | 0.649 | 0.656 | 0.659 | 0.646 | 0 |
| Naïve bay | 0.607 | 0.618 | 0.618 | 0.628 | 0.632 | 0.613 | 0 |
| SVM | 0.471 | 0.489 | 0.489 | 0.453 | 0.262 | 0.341 | 0 |
| Logistic | 0.659 | 0.634 | 0.636 | 0.636 | 0.636 | 0.633 | 0 |
| SMO | 0.565 | 0.565 | 0.565 | 0.565 | 0.565 | 0.565 | 0.05 |
| Muti layer | 0.651 | 0.611 | 0.611 | 0.611 | 0.611 | 0.611 | 8.7 |