Feature Descriptor: LBP

1. Feature Selection: CFS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.559 | 0.511 | 0.511 | 0.512 | 0.513 | 0.512 | 0 |
| J48 binary tree | 0.62 | 0.595 | 0.595 | 0.596 | 0.596 | 0.596 | 0 |
| AODE | 0.813 | 0.725 | 0.725 | 0.726 | 0.726 | 0.725 | 0 |
| Bayes network | 0.856 | 0.779 | 0.779 | 0.783 | 0.785 | 0.778 | 0 |
| Naïve bay | 0.844 | 0.786 | 0.786 | 0.791 | 0.794 | 0.786 | 0 |
| SVM | 0.548 | 0.565 | 0.565 | 0.532 | 0.704 | 0.459 | 0 |
| Logistic | 0.69 | 0.664 | 0.664 | 0.664 | 0.665 | 0.664 | 0 |
| SMO | 0.694 | 0.695 | 0.695 | 0.694 | 0.695 | 0.695 | 0 |
| Muti layer | 0.743 | 0.687 | 0.687 | 0.686 | 0.687 | 0.687 | 11.61 |

1. Feature Selection: Chi-Square

K=10

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.51 | 0.511 | 0.511 | 0.51 | 0.511 | 0.511 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.97 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=20

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.51 | 0.511 | 0.511 | 0.51 | 0.511 | 0.511 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.97 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=30

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.51 | 0.511 | 0.511 | 0.51 | 0.511 | 0.511 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.97 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=40

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.51 | 0.511 | 0.511 | 0.51 | 0.511 | 0.511 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.97 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=50

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.51 | 0.511 | 0.511 | 0.51 | 0.511 | 0.511 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.97 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=60

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.51 | 0.511 | 0.511 | 0.51 | 0.511 | 0.511 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.97 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

1. Feature Selection: Gain Ratio

K=10

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.502 | 0.489 | 0.489 | 0.486 | 0.488 | 0.488 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.74 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=20

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.502 | 0.489 | 0.489 | 0.486 | 0.488 | 0.488 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.74 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=30

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.502 | 0.489 | 0.489 | 0.486 | 0.488 | 0.488 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.74 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=40

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.502 | 0.489 | 0.489 | 0.486 | 0.488 | 0.488 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.74 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=50

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.502 | 0.489 | 0.489 | 0.486 | 0.488 | 0.488 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.74 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=60

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.502 | 0.489 | 0.489 | 0.486 | 0.488 | 0.488 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.76 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

1. Feature Selection: Information Gain

K=10

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.456 | 0.473 | 0.473 | 0.472 | 0.474 | 0.473 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.82 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=20

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.456 | 0.473 | 0.473 | 0.472 | 0.474 | 0.473 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.82 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=30

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.456 | 0.473 | 0.473 | 0.472 | 0.474 | 0.473 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.82 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=40

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.456 | 0.473 | 0.473 | 0.472 | 0.474 | 0.473 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.82 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=50

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.456 | 0.473 | 0.473 | 0.472 | 0.474 | 0.473 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.82 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=60

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.493 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.456 | 0.473 | 0.473 | 0.472 | 0.474 | 0.473 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.17 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.82 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

1. Feature Selection: Relief

K=10

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.509 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.493 | 0.504 | 0.504 | 0.407 | 0.501 | 0.5 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.15 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.77 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=20

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.509 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.493 | 0.504 | 0.504 | 0.407 | 0.501 | 0.5 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.15 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.77 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=30

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.509 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.493 | 0.504 | 0.504 | 0.407 | 0.501 | 0.5 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.15 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.77 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=40

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.509 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.493 | 0.504 | 0.504 | 0.407 | 0.501 | 0.5 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.15 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.77 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=50

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.509 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.493 | 0.504 | 0.504 | 0.407 | 0.501 | 0.5 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.15 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.77 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |

K=60

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Algorithm | AUC | AC | SN | SP | PR | FM | TIME |
| J48 | 0.509 | 0.519 | 0.519 | 0.522 | 0.521 | 0.519 | 0 |
| J48 binary tree | 0.493 | 0.504 | 0.504 | 0.407 | 0.501 | 0.5 | 0 |
| AODE | 0.567 | 0.573 | 0.573 | 0.569 | 0.572 | 0.572 | 0.15 |
| Bayes network | 0.56 | 0.511 | 0.511 | 0.509 | 0.511 | 0.511 | 0 |
| Naïve bay | 0.562 | 0.542 | 0.542 | 0.536 | 0.54 | 0.539 | 0 |
| SVM | 0.5 | 0.519 | 0.519 | 0.481 | 0.269 | 0.355 | 0.25 |
| Logistic | 0.559 | 0.542 | 0.542 | 0.544 | 0.544 | 0.542 | 0.77 |
| SMO | 0.48 | 0.481 | 0.481 | 0.478 | 0.48 | 0.48 | 0.05 |
| Muti layer |  |  |  |  |  |  |  |