# Algorithm analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Algorithm** | **Class balancing** | **Accuracy** | **Precision** | | **Recall** | |
| Survived | | Survived | |
| Yes | No | Yes | No |
| Decision trees | Yes | 80.98 | 85.67 | 75.12 | 81.16 | 80.73 |
| No | 79.12 | 64.91 | 87.97 | 77.08 | 80.09 |
| Naïve Bayes | Yes | 74.26 | 81.28 | 65.48 | 74.66 | 73.66 |
| No | 77.78 | 73.09 | 80.69 | 70.22 | 82.80 |
| kNN (k=13) | Yes | 73.99 | 80.01 | 66.46 | 74.90 | 72.67 |
| No | 70.92 | 48.24 | 85.06 | 66.80 | 72.51 |
| Neural Network layers=2, neurons=(2,2),  error\_threshold=0.1 | Yes | 82.50 | 89.08 | 74.26 | 81.24 | 84.46 |
| No | 74.50 | 50.29 | 89.61 | 75.10 | 74.32 |
| SVM (kernel=radial, cost=400) | Yes | 72.21 | 65.88 | 80.12 | 80.57 | 65.24 |
| No | 72.15 | 45.02 | 89.07 | 71.96 | 72.23 |

SVM

– linear = 65.00

– polynomial = 59.42

– sigmoid = 51.11

Neural Nets

– rprop+ = 81.78

– rprop- = 72.80