Model Classification 2

**Bayesian Network**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Classification** | | | | |
|  | **Class** | Happy | Interested | Sad | Worried | Stern |
| **True Class** | Happy | 12 | 0 | 0 | 0 | 0 |
| Interested | 11 | 0 | 0 | 0 | 0 |
| Sad | 10 | 0 | 0 | 0 | 0 |
| Worried | 12 | 0 | 0 | 0 | 0 |
| Stern | 9 | 0 | 0 | 0 | 0 |

Correctly Classified Instances 12 22.2222 %

Incorrectly Classified Instances 42 77.7778 %

**Naïve Bayes**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Classification** | | | | |
|  | **Class** | Happy | Interested | Sad | Worried | Stern |
| **True Class** | Happy | 6 | 2 | 1 | 2 | 1 |
| Interested | 0 | 3 | 2 | 4 | 2 |
| Sad | 1 | 1 | 5 | 2 | 1 |
| Worried | 2 | 1 | 2 | 6 | 1 |
| Stern | 0 | 2 | 2 | 1 | 4 |

Correctly Classified Instances 24 44.4444 %

Incorrectly Classified Instances 30 55.5556 %

**Multilayer Perceptron → Neural net**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Classification** | | | | |
|  | **Class** | Happy | Interested | Sad | Worried | Stern |
| **True Class** | Happy | 4 | 2 | 5 | 1 | 0 |
| Interested | 2 | 3 | 4 | 1 | 1 |
| Sad | 3 | 0 | 7 | 0 | 0 |
| Worried | 2 | 2 | 2 | 6 | 0 |
| Stern | 1 | 0 | 1 | 0 | 7 |

Correctly Classified Instances 27 50 %

Incorrectly Classified Instances 27 50 %

**Random Forest**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Classification** | | | | |
|  | **Class** | Happy | Interested | Sad | Worried | Stern |
| **True Class** | Happy | 8 | 0 | 3 | 1 | 0 |
| Interested | 1 | 10 | 0 | 0 | 0 |
| Sad | 1 | 0 | 9 | 0 | 0 |
| Worried | 0 | 0 | 2 | 10 | 0 |
| Stern | 0 | 0 | 1 | 0 | 8 |

Correctly Classified Instances 45 83.3333 %

Incorrectly Classified Instances 9 16.6667 %

**SVM**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Classification** | | | | |
|  | **Class** | Happy | Interested | Sad | Worried | Stern |
| **True Class** | Happy | 7 | 2 | 1 | 1 | 1 |
| Interested | 2 | 9 | 0 | 0 | 0 |
| Sad | 4 | 1 | 4 | 0 | 1 |
| Worried | 5 | 0 | 1 | 5 | 1 |
| Stern | 1 | 1 | 0 | 0 | 7 |

Correctly Classified Instances 32 59.2593 %

Incorrectly Classified Instances 22 40.7407 %