Table 9. Comparison of performance between the proposed system with feature selection and without feature selection

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dataset | Without feature selection | | With EN-ICSA feature selection | |
| Acc (%) | Pre (%) | Acc (%) | Pre (%) |
| Breastcancer | 64.29 | 41.33 | **94.62** | **97.68** |
| BreastEW | 78.36 | 83.81 | **88.89** | **90.07** |
| HeartEW | 62.96 | 39.64 | **85.19** | **85.07** |
| IonosphereEW | 83.81 | 87.05 | **89.52** | **90.03** |
| Lymphography | 71.11 | 66.07 | **80.01** | **74.69** |
| SpectEW | 76.25 | 58.14 | **79.48** | **79.33** |
| Parkinson’s Disease | 73.12 | 53.47 | **86.62** | **81.85** |
| Average | 72.84 | 61.36 | **86.76** | **85.57** |