In the neural network, 3 different activation functions were used to test the data.

The performance for sigmoid is attached here due to its better performance.

The accuracy is the average accuracy for 5 runs.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Hidden neuron | Iteration | Learning rate | Momentum | Decay | Accuracy | Running  Time on local machine (sec) |
| 10 | 5 | 0.01 | 0.5 | 0.001 | 54.14% | 29.99 |
| 10 | 54.08% | 50.63 |
| 20 | 57.37% | 97.30 |
| 40 | 5 | 61.71% | 38.29 |
| 10 | 62.87% | 63.32 |
| 20 | 68.34% | 113.86 |
| 100 | 5 | 55.56% | 42.63 |
| 10 | 54.79% | 86.05 |
| 20 | 54.28% | 170.63 |