Sashain

Step one :- merging the data sets

We have six different data sets and 10 users. When I get the 1st data set I meagre the 10 users and get that data in one file.

Summarize the result in that 1st data set.

Step 2 :- feedforward\_train\_test\_merged\_dataset

|  |  |  |  |
| --- | --- | --- | --- |
|  | Hidden layer size,  Validation,  Parameters | Training accuracy | Test accuracy |
| 1 | [20,10]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 97.62% | 75.93% |
| 2 | [25,15]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 100.00% | 70.37% |
| 3 | [40,10]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 100.00% | 81.48% |
| 4 | Hidden layer size,  Validation,  Parameters | 100.00% | 66.67% |
| 5 | [20,10]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 86.90% | 59.26% |

Step 3 :- optimization\_trained\_dataset

|  |  |  |  |
| --- | --- | --- | --- |
|  | Hidden layer size,  Validation,  Parameters | Validation accuracy after PCA | Test (optimization) accuracy after PCA |
| 1 | [20,10]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 3.70% | 12.96% |
| 2 | [25,15]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 72.22% | 79.63% |
| 3 | [40,10]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 72.22% | 74.07% |
| 4 | [45,15]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 66.67% | 62.96% |
| 5 | [60,10]  70%, 15%, 15%  1000, 1e-6, 1e-7 | 66.67% | 59.70% |

Step 4:- using\_loop\_training\_dataset

|  |  |
| --- | --- |
| Hidden layers | 40,10 |
| Validation | 70%, 15%, 15% |
| Parameters | 1000, 1e-6, 1e-7 |
| Training Accuracy | 88.89% |
| Testing Accuracy | 72.22% |

Step 5 :- optimization\_loop\_tain\_dataset

|  |  |
| --- | --- |
| Hidden layers | 25,15 |
| Validation | 70%, 15%, 15% |
| Parameters | 1000, 1e-6, 1e-7 |
| Validation Accuracy | 77.22% |
| Testing Accuracy | 72.41% |