



CIFAR-10 Database

Laboratory 14

Neural Networks

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Index

| | |
|--|-----|
| Softmax Linear..... | 3,4 |
| Softmax 1HL..... | 5,6 |
| Softmax 2HL (with Regularization)..... | 7,8 |

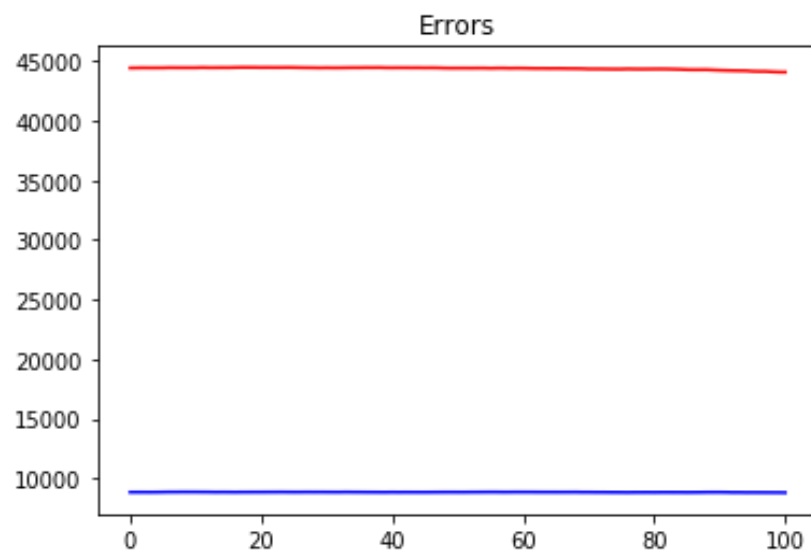
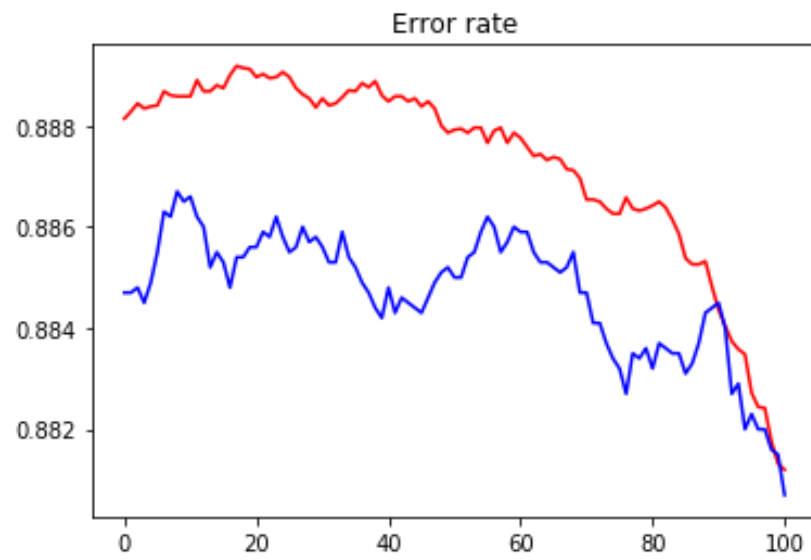
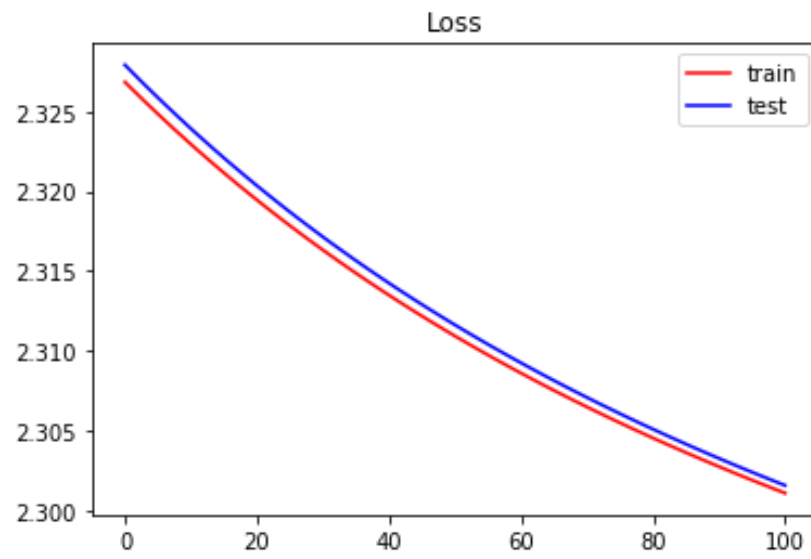
Softmax Linear

```
dloss: 2.326864385417531
erate: 0.88814
errors: 44407
test dloss: 2.3279389390450325
test erate: 0.8847
test errors: 8847
```

```
starting learning...
```

Best test error rate: 88.07%

```
iteration 100
dloss: 2.301059377744474
erate: 0.8812
errors: 44060
test dloss: 2.3015437155847773
test erate: 0.8807
test errors: 8807
learning finished
Minimum training error rate: 0.8812 for iteration 100
Minimum testing error rate: 0.8807 for iteration 100
```



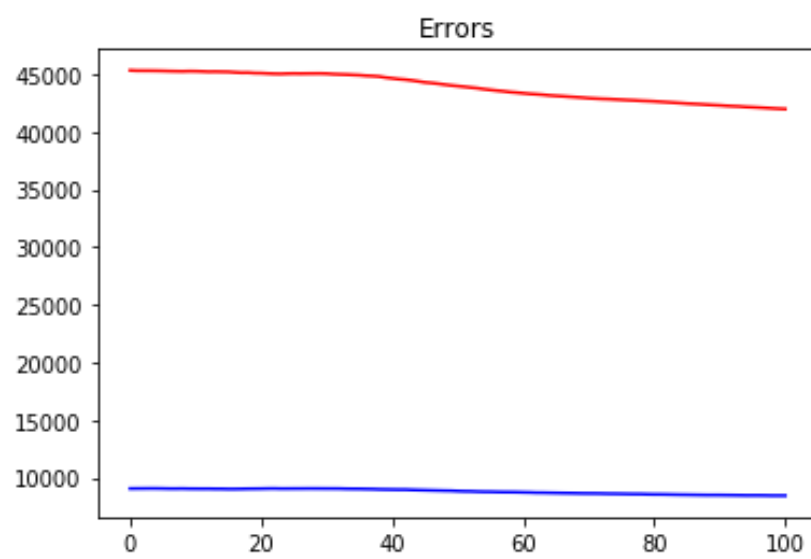
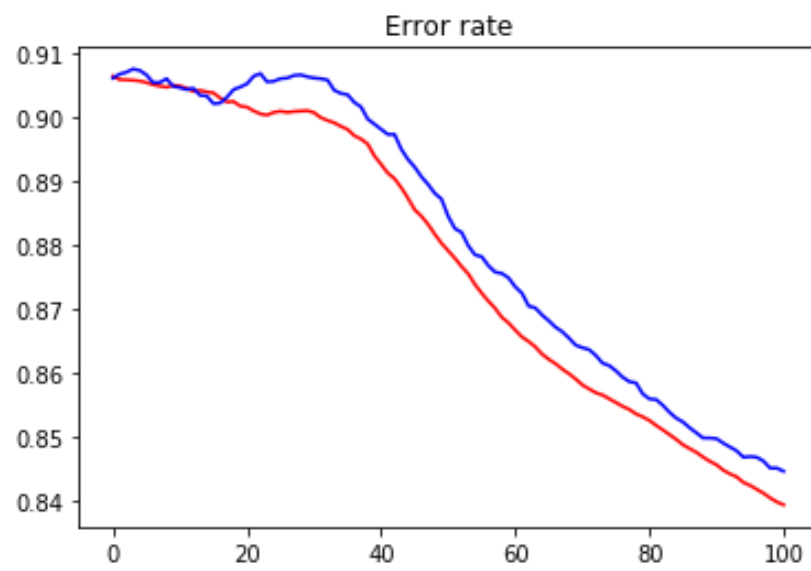
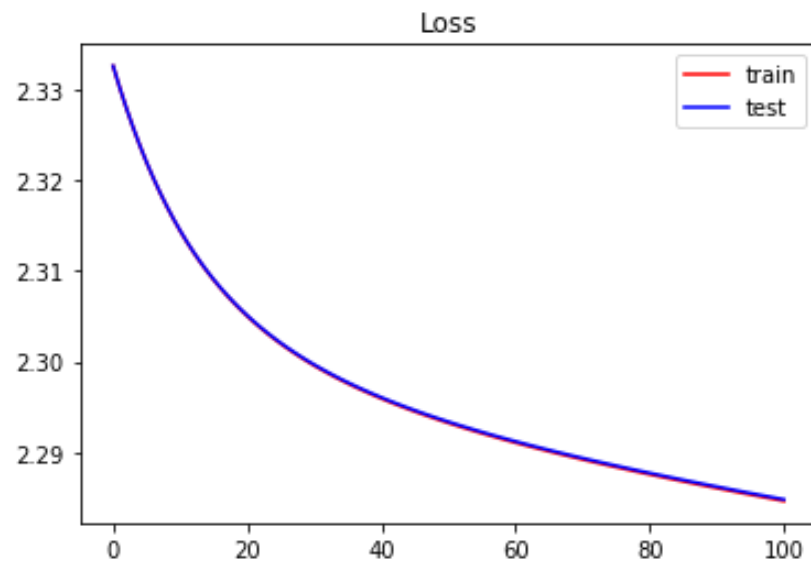
Softmax1HL

```
dloss: 2.3361809016120456
erate: 0.90014
errors: 45007
test dloss: 2.335989411581475
test erate: 0.9003
test errors: 9003
```

```
starting learning...
```

Best test error rate: 84.47%

```
iteration 100
dloss: 2.2846192245517445
erate: 0.83946
errors: 41973
test dloss: 2.2847910514403025
test erate: 0.8447
test errors: 8447
learning finished
Minimum training error rate: 0.83946 for iteration 100
Minimum testing error rate: 0.8447 for iteration 100
```



Softmax2HL with Regularization

```
dloss: 2.3832270457859446
erate: 0.9
errors: 45000
test dloss: 2.3832072780795177
test erate: 0.9
test errors: 9000
```

```
starting learning...
```

Best test error rate: 90.00%

```
iteration 100
dloss: 2.380936290390154
erate: 0.9
errors: 45000
test dloss: 2.3809176622970787
test erate: 0.9
test errors: 9000
learning finished
Minimum training error rate: 0.9 for iteration 0
Minimum testing error rate: 0.9 for iteration 0
```

