

```
In [132]: data_processing()
```

```
shape (683, 10)
```

```
/Users/sravanreddy/opt/anaconda3/envs/tf/lib/python3.7/site-packages/ipykernel_launcher.py:3: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead
```

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy ([http s://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

This is separate from the ipykernel package so we can avoid doing imports until

```
/Users/sravanreddy/opt/anaconda3/envs/tf/lib/python3.7/site-packages/ipykernel_launcher.py:4: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead
```

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy ([http s://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

after removing the cwd from sys.path.

```
scores - error 0.20938260853290558 acc 0.93430656
activation_function sigmoid lr 0.01 epoch 100 num_hidden_layers 2
train_loss 0.2567415452279123 train_accuracy 0.9194139 test_loss 0.20938262272707736 test_accuracy 0.93430656
```

Confusion matrix

```
Class 0 1
```

```
row_0
```

```
0 90 9
```

```
1 0 38
```

```
scores - error 0.6445194482803345 acc 0.6569343
```

```
activation_function sigmoid lr 0.01 epoch 100 num_hidden_layers 3
train_loss 0.6514596340311316 train_accuracy 0.64835167 test_loss 0.6445194663357561 test_accuracy 0.6569343
```

Confusion matrix

```
Class 0 1
```

```
row_0
```

```
0 90 47
```

```
scores - error 0.5876699090003967 acc 0.7080292
```

```
activation_function sigmoid lr 0.1 epoch 100 num_hidden_layers 2
train_loss 0.5977470637896122 train_accuracy 0.64835167 test_loss 0.5876699361922967 test_accuracy 0.7080292
```

Confusion matrix

```
Class 0 1
```

```
row_0
```

```
0 90 40
```

```
1 0 7
```

No artists with labels found to put in legend. Note that artists whose label start with an underscore are ignored when legend() is called with no argument.

```
scores - error 0.643119752407074 acc 0.6569343
activation_function sigmoid lr 0.1 epoch 100 num_hidden_layers 3
train_loss 0.6498358465813019 train_accuracy 0.64835167 test_loss 0.
6431197297834131 test_accuracy 0.6569343
```

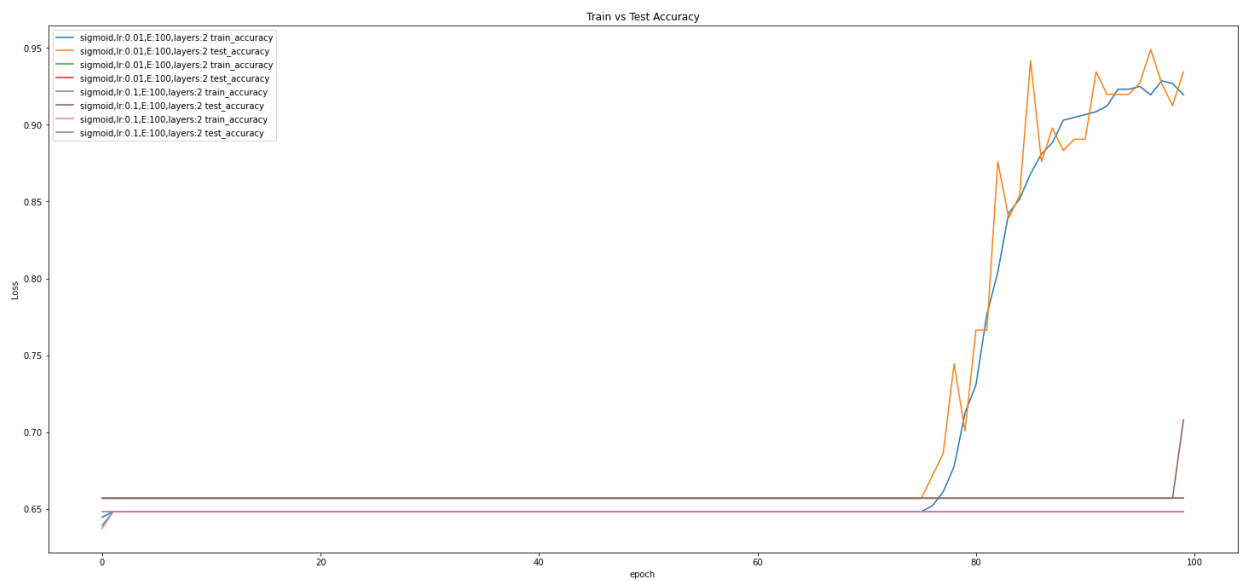
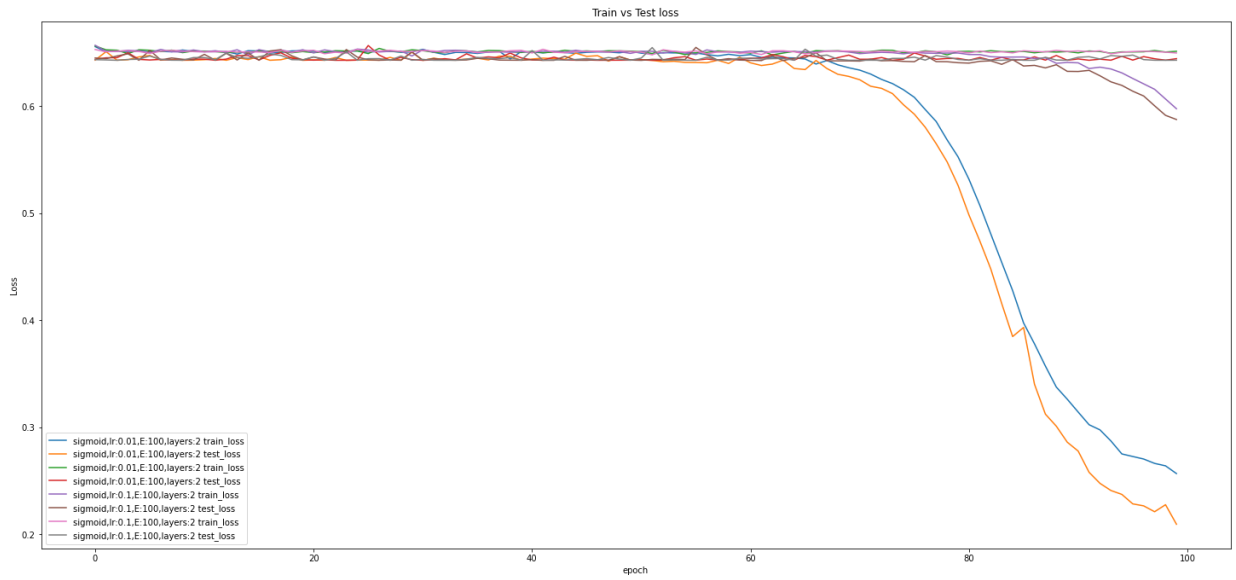
Confusion matrix

Class 0 1

row_0

0 00 47

epoch:100



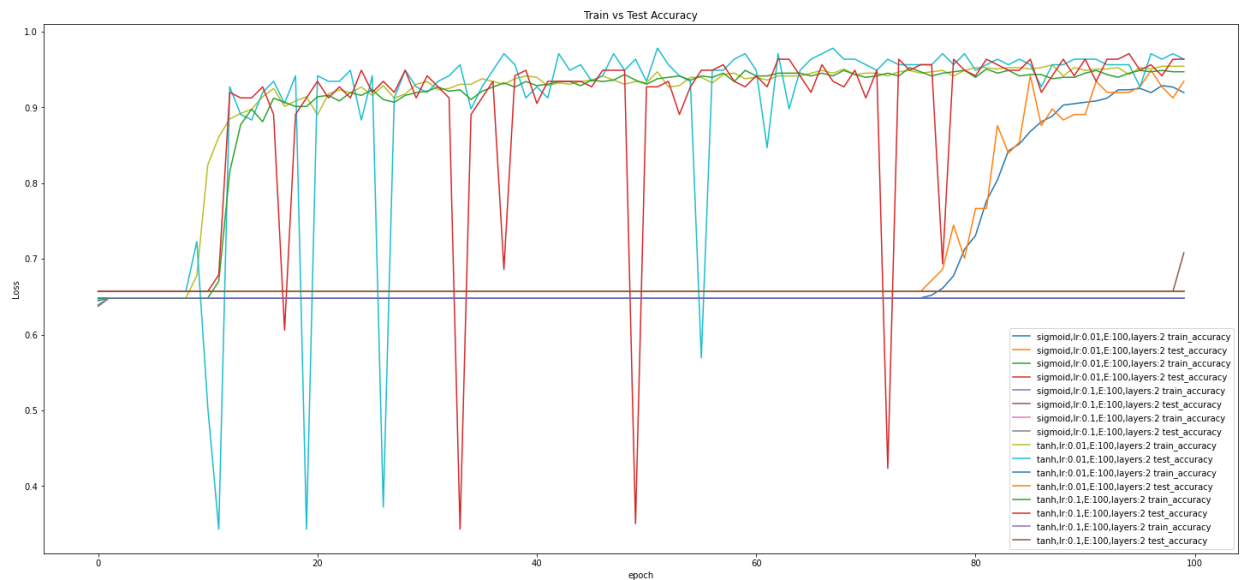
```

scores - error 0.14486554265022278 acc 0.96350366
activation_function tanh lr 0.01 epoch 100 num_hidden_layers 2
train_loss 0.17956110466640074 train_accuracy 0.9542124 test_loss 0.
14486552617193138 test_accuracy 0.96350366
Confusion matrix
Class 0 1
row_0
0 90 5
1 0 42
scores - error 0.6447886228561401 acc 0.6569343
activation_function tanh lr 0.01 epoch 100 num_hidden_layers 3
train_loss 0.6498979673935816 train_accuracy 0.64835167 test_loss 0.
644788679197757 test_accuracy 0.6569343
Confusion matrix
Class 0 1
row_0
0 90 47
scores - error 0.13074903190135956 acc 0.96350366
activation_function tanh lr 0.1 epoch 100 num_hidden_layers 2
train_loss 0.17648148926097776 train_accuracy 0.9468864 test_loss 0.
13074902953566425 test_accuracy 0.96350366
Confusion matrix
Class 0 1
row_0
0 89 4
1 1 43

No artists with labels found to put in legend. Note that artists whose
label start with an underscore are ignored when legend() is called with
no argument.

```

epoch:100



```

scores - error 0.6434459686279297 acc 0.6569343
activation_function relu lr 0.01 epoch 100 num_hidden_layers 2
train_loss 0.6503724396337957 train_accuracy 0.64835167 test_loss 0.
6434459048901161 test_accuracy 0.6569343
Confusion matrix
Class 0 1
row_0
0 90 47
scores - error 0.6435582637786865 acc 0.6569343
activation_function relu lr 0.01 epoch 100 num_hidden_layers 3
train_loss 0.6501086568221067 train_accuracy 0.64835167 test_loss 0.
6435582217943929 test_accuracy 0.6569343
Confusion matrix
Class 0 1
row_0
0 90 47
scores - error 0.20616266131401062 acc 0.93430656
activation_function relu lr 0.1 epoch 100 num_hidden_layers 2
train_loss 0.2867570663307667 train_accuracy 0.9120879 test_loss 0.2
0616266918606566 test_accuracy 0.93430656
Confusion matrix
Class 0 1
row_0
0 90 9
1 0 38

```

No artists with labels found to put in legend. Note that artists whose l

Labels starting with an underscore are ignored when `legend()` is called with no argument.

```
scores - error 0.6435933113098145 acc 0.6569343
activation_function relu lr 0.1 epoch 100 num_hidden_layers 3
train_loss 0.6503596690657375 train_accuracy 0.64835167 test_loss 0.
6435934105058656 test_accuracy 0.6569343
```

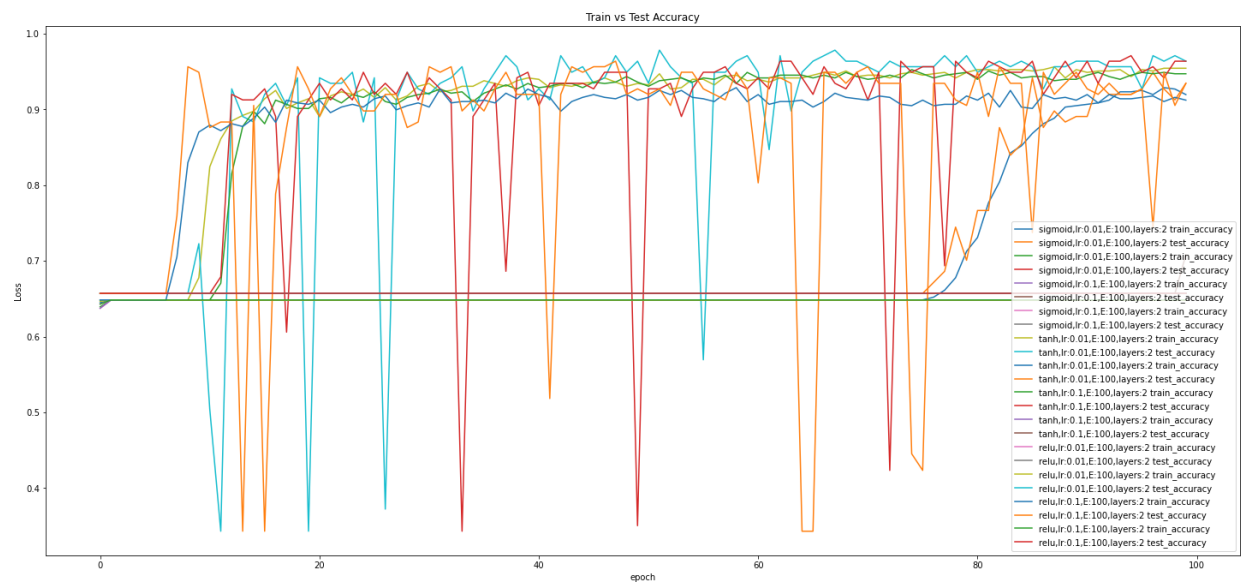
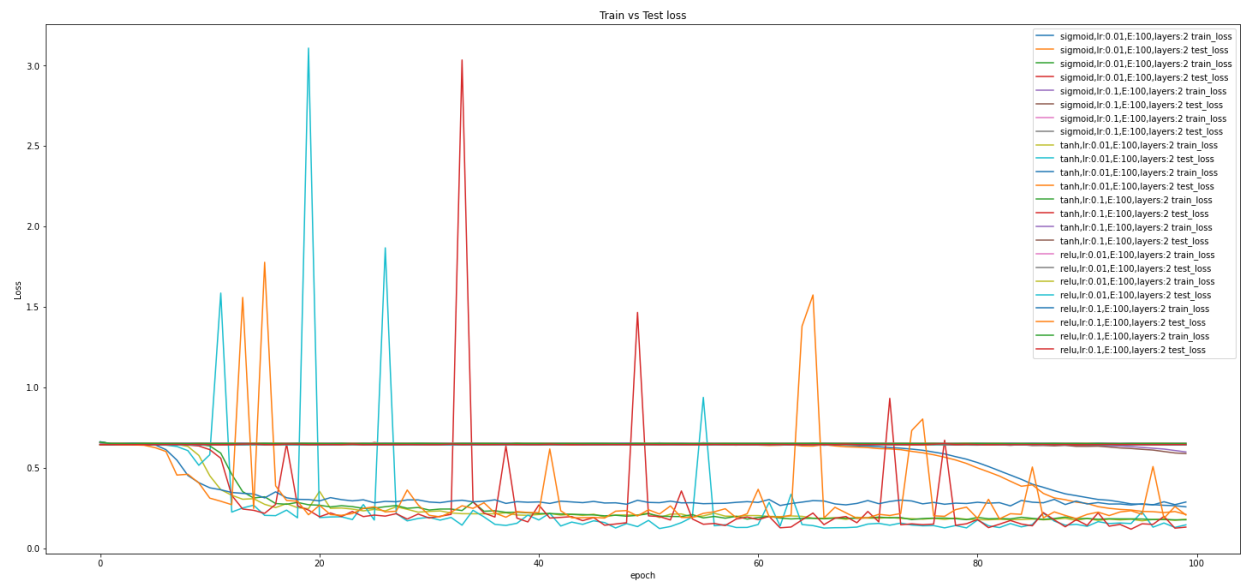
Confusion matrix

Class	0	1
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row_0

0 90 47

epoch:100



```
scores - error 0.14228884875774384 acc 0.95620435
activation_function sigmoid lr 0.01 epoch 200 num_hidden_layers 2
train_loss 0.1996705122496728 train_accuracy 0.9358974 test_loss 0.1
4228886059981627 test_accuracy 0.95620435
Confusion matrix
Class 0 1
row_0
0 90 6
1 0 41
scores - error 0.6443517208099365 acc 0.6569343
activation_function sigmoid lr 0.01 epoch 200 num_hidden_layers 3
train_loss 0.6504664168908045 train_accuracy 0.64835167 test_loss 0.
6443517282061333 test_accuracy 0.6569343
Confusion matrix
Class 0 1
row_0
0 90 47
scores - error 0.2646437883377075 acc 0.90510947
activation_function sigmoid lr 0.1 epoch 200 num_hidden_layers 2
train_loss 0.2158080448256635 train_accuracy 0.93040293 test_loss 0.
26464380867724874 test_accuracy 0.90510947
Confusion matrix
Class 0 1
row_0
0 79 2
1 11 45
```

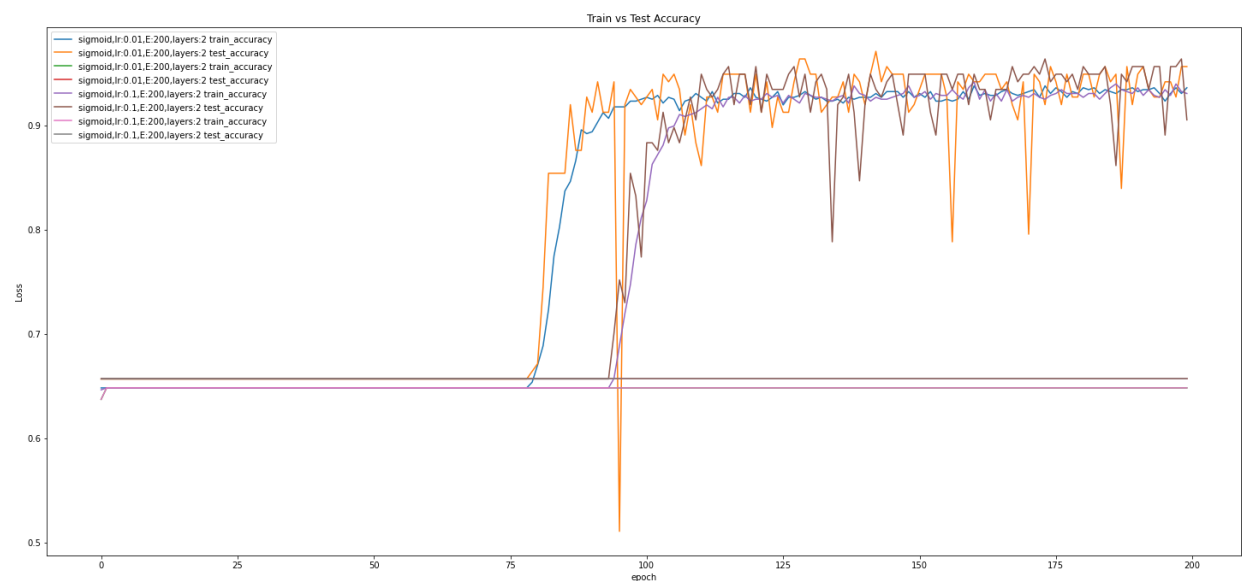
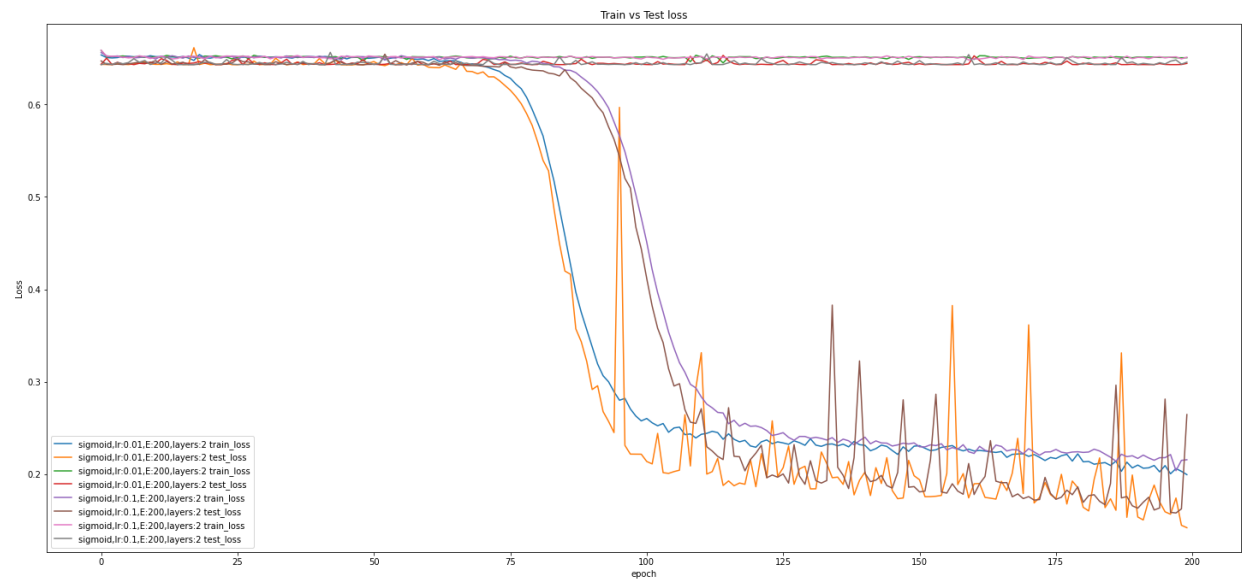
No artists with labels found to put in legend. Note that artists whose label start with an underscore are ignored when legend() is called with no argument.

```
scores - error 0.6457242369651794 acc 0.6569343
activation_function sigmoid lr 0.1 epoch 200 num_hidden_layers 3
train_loss 0.6510533370050319 train_accuracy 0.64835167 test_loss 0.
6457241919353931 test_accuracy 0.6569343
```

Confusion matrix

```
Class    0    1
row_0
0        90   47
```

epoch:200




```
scores - error 0.1423621028661728 acc 0.95620435
activation_function tanh lr 0.01 epoch 200 num_hidden_layers 2
train_loss 0.1771747600815972 train_accuracy 0.94871795 test_loss 0.
14236208700649713 test_accuracy 0.95620435
Confusion matrix
Class 0 1
row_0
0 90 6
1 0 41
scores - error 0.6432263851165771 acc 0.6569343
activation_function tanh lr 0.01 epoch 200 num_hidden_layers 3
train_loss 0.6510207233302322 train_accuracy 0.64835167 test_loss 0.
6432263309503123 test_accuracy 0.6569343
Confusion matrix
Class 0 1
row_0
0 90 47
scores - error 0.17467784881591797 acc 0.9489051
activation_function tanh lr 0.1 epoch 200 num_hidden_layers 2
train_loss 0.1690024525548021 train_accuracy 0.94871795 test_loss 0.
1746778497608365 test_accuracy 0.9489051
Confusion matrix
Class 0 1
row_0
```

```
0      90      7
1      0      40
```

No artists with labels found to put in legend. Note that artists whose label start with an underscore are ignored when legend() is called with no argument.

```
scores - error 0.16311995685100555 acc 0.96350366
activation_function tanh lr 0.1 epoch 200 num_hidden_layers 3
train_loss 0.19628279845847751 train_accuracy 0.9468864 test_loss 0.
1631199575172071 test_accuracy 0.96350366
```

Confusion matrix

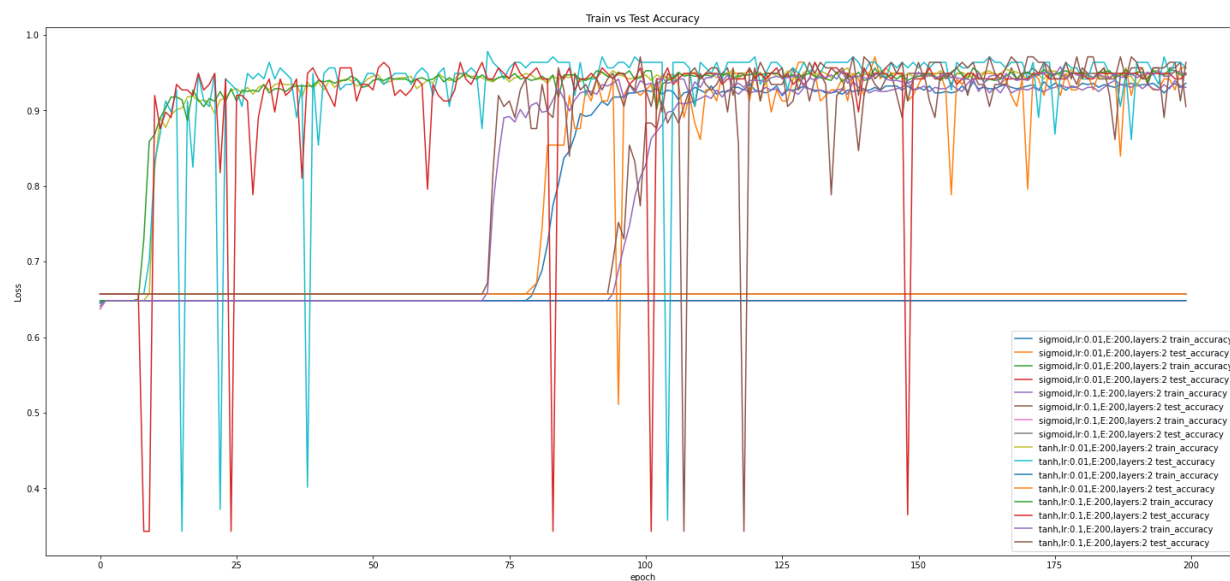
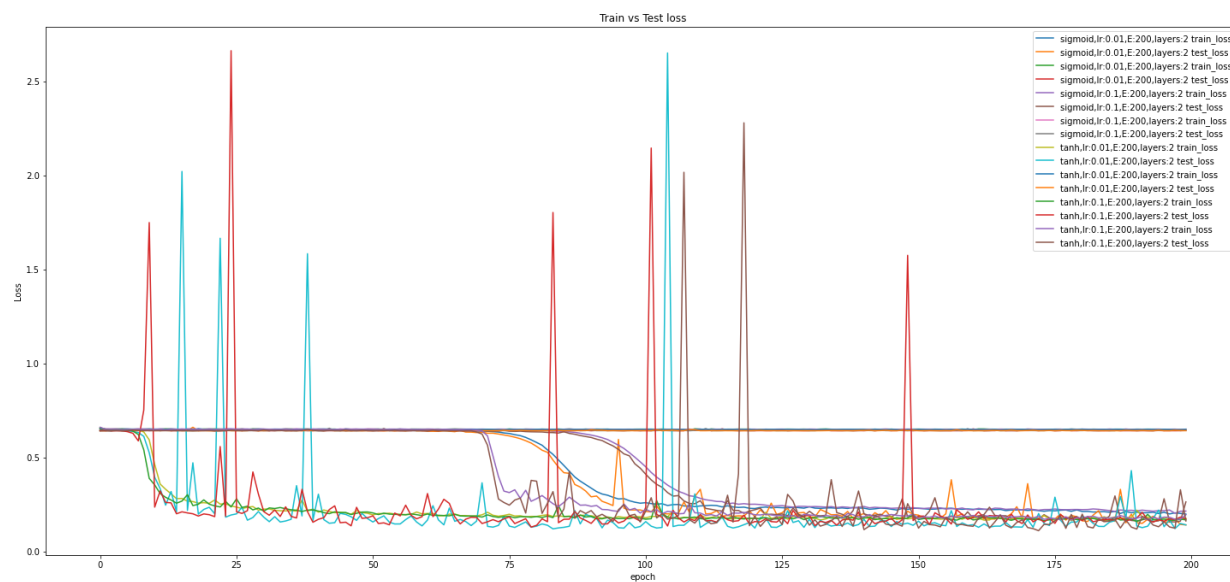
```
Class 0 1
```

```
row_0
```

```
0      90      5
```

```
1      0      42
```

epoch:200



```
scores - error 0.180039182305336 acc 0.94160587
activation_function relu lr 0.01 epoch 200 num_hidden_layers 2
train_loss 0.22325535931064297 train_accuracy 0.9212454 test_loss
0.1800391667855591 test_accuracy 0.94160587
Confusion matrix
Class 0 1
row_0
0 90 8
1 0 39
scores - error 0.6430653929710388 acc 0.6569343
activation_function relu lr 0.01 epoch 200 num_hidden_layers 3
train_loss 0.6503286148820605 train_accuracy 0.64835167 test_loss
0.6430653251000564 test_accuracy 0.6569343
Confusion matrix
Class 0 1
row_0
0 90 47
scores - error 0.15095959603786469 acc 0.93430656
activation_function relu lr 0.1 epoch 200 num_hidden_layers 2
train_loss 0.16937061394919936 train_accuracy 0.94505495 test_loss
0.15095961410688222 test_accuracy 0.93430656
```

Confusion matrix

Class 0 1

row_0

0 90 9

1 0 38

No artists with labels found to put in legend. Note that artists whose label start with an underscore are ignored when legend() is called with no argument.

scores - error 0.6430912613868713 acc 0.6569343

activation_function relu lr 0.1 epoch 200 num_hidden_layers 3

train_loss 0.6504092500869171 train_accuracy 0.64835167 test_loss 0.6430912537731394 test_accuracy 0.6569343

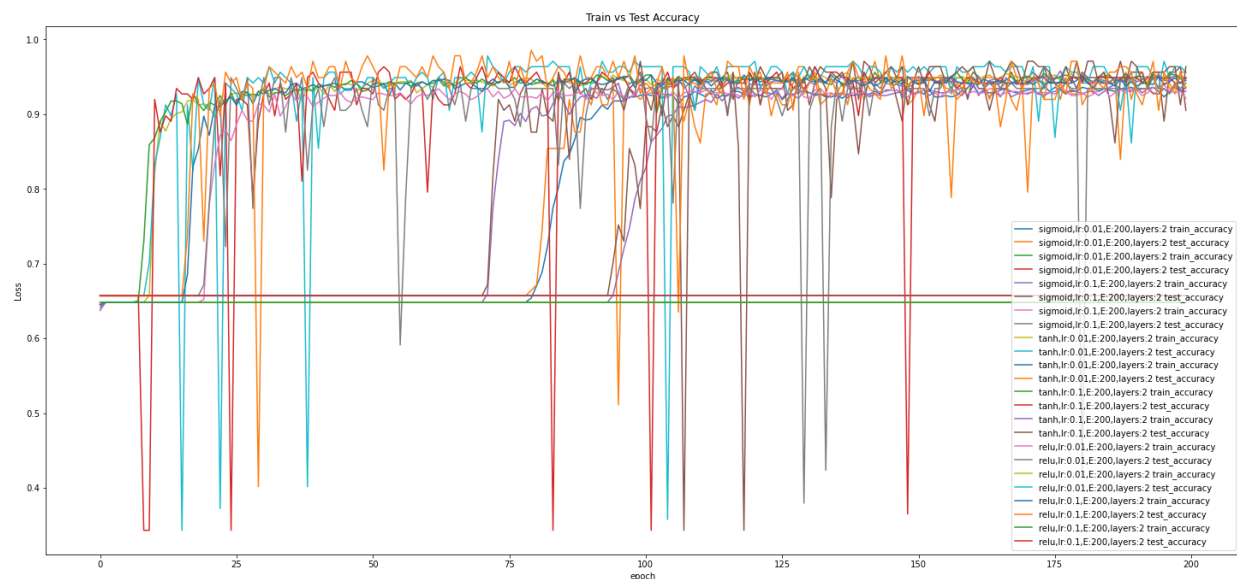
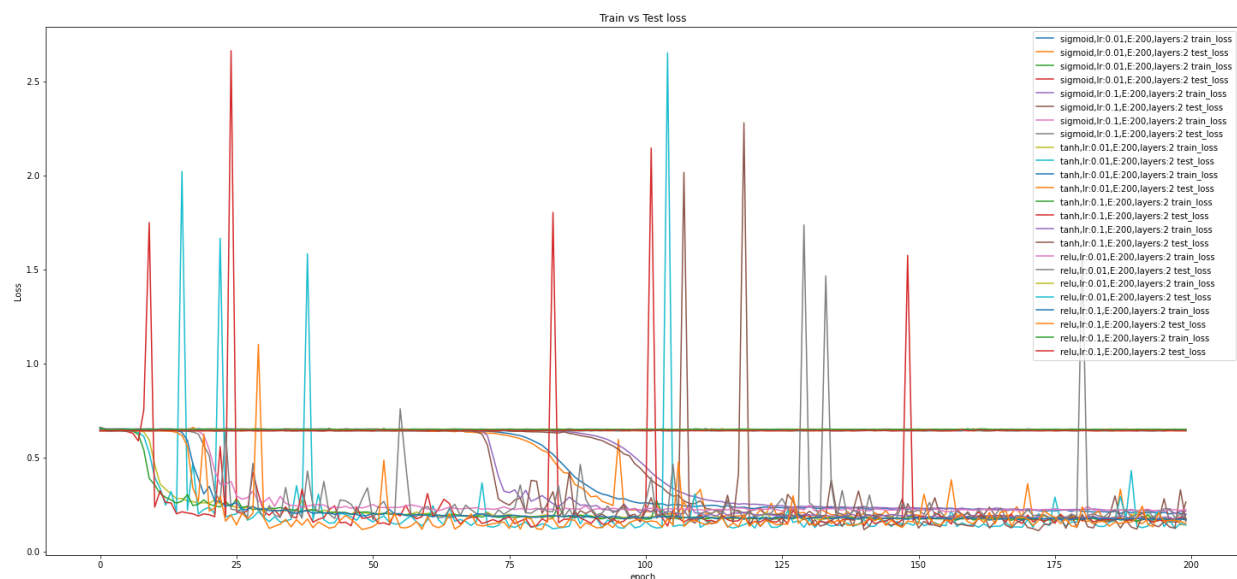
Confusion matrix

Class 0 1

row_0

0 90 47

epoch:200



In []: