Report

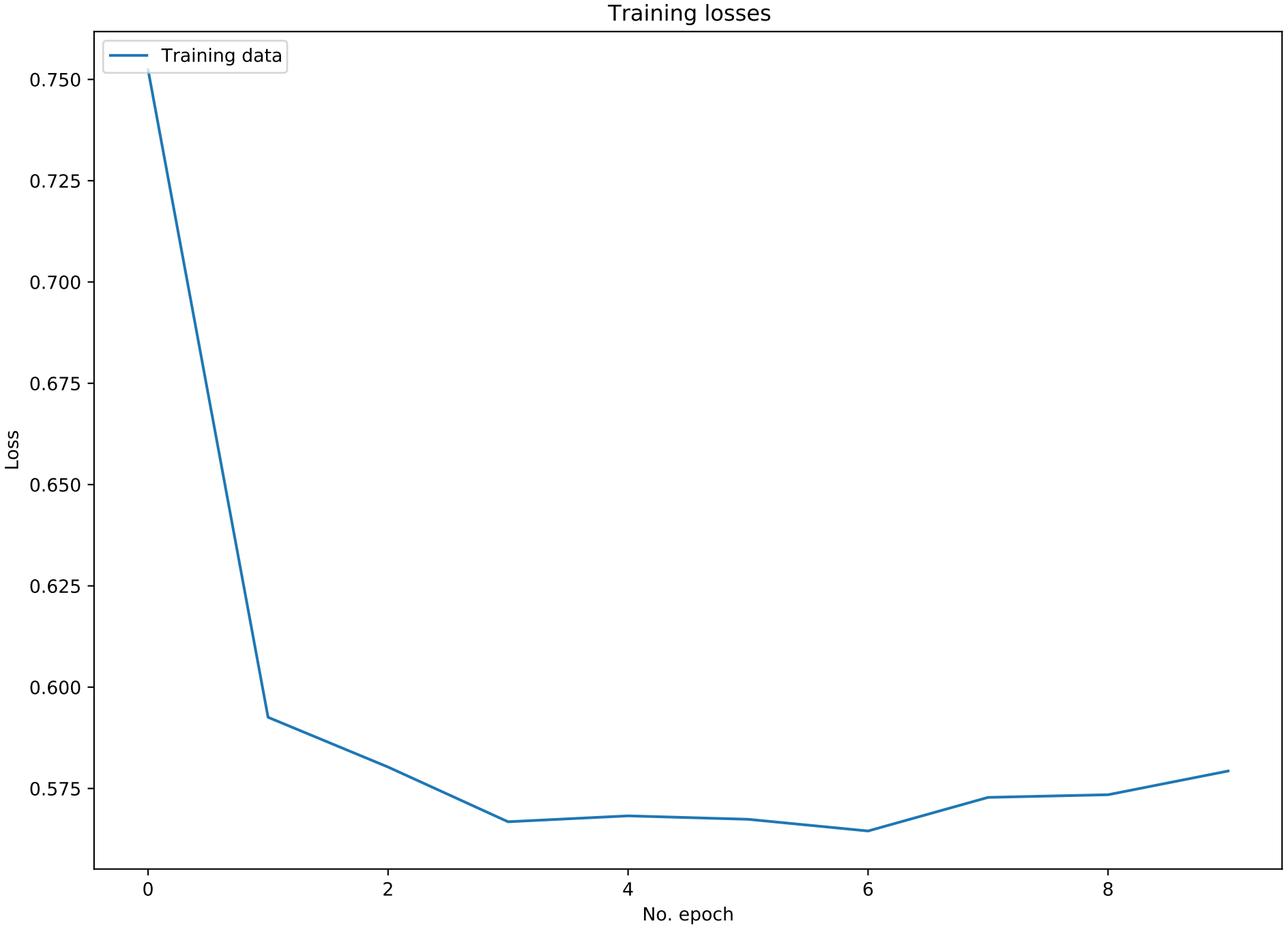
Keras

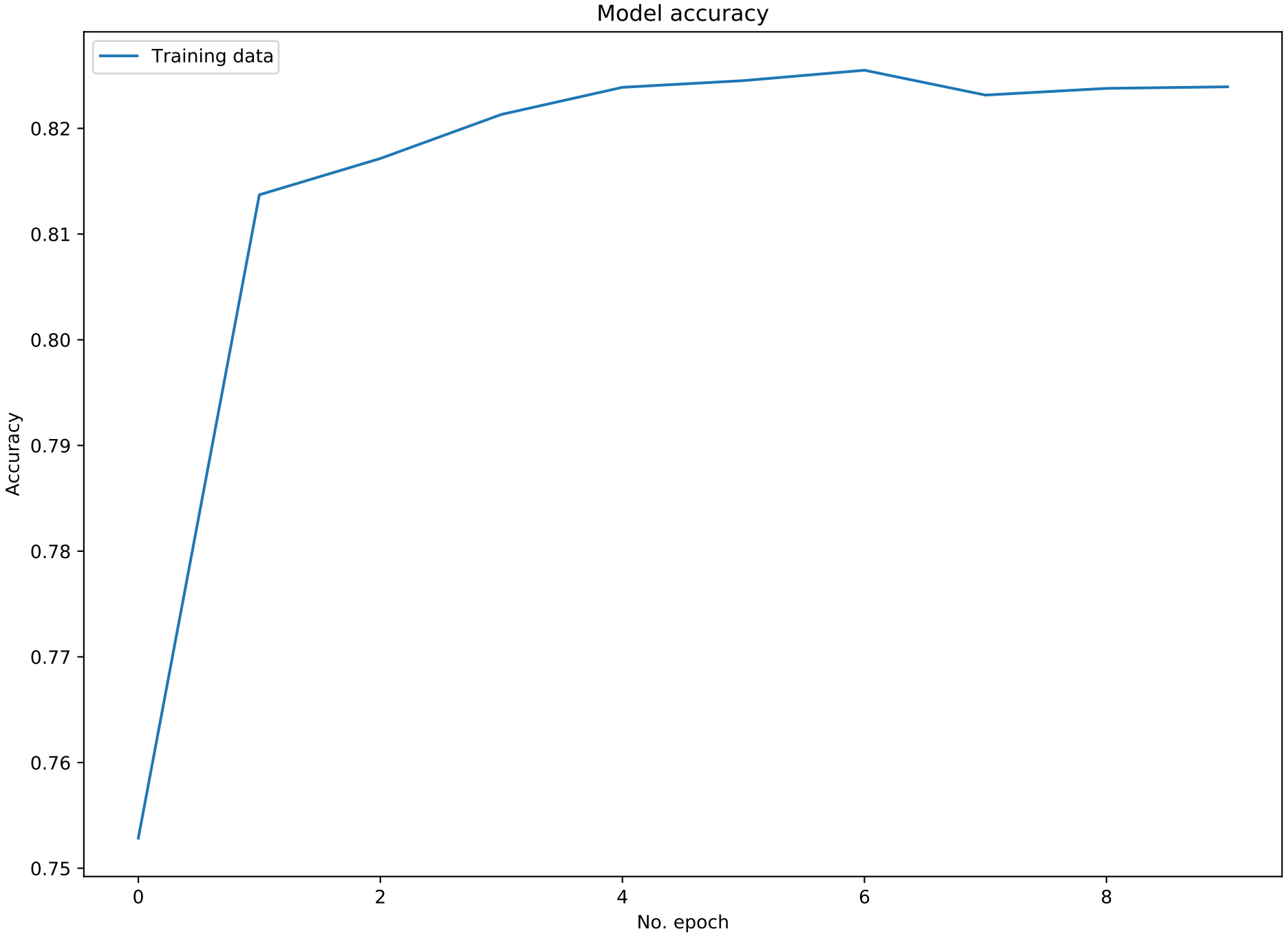
Model: "model"

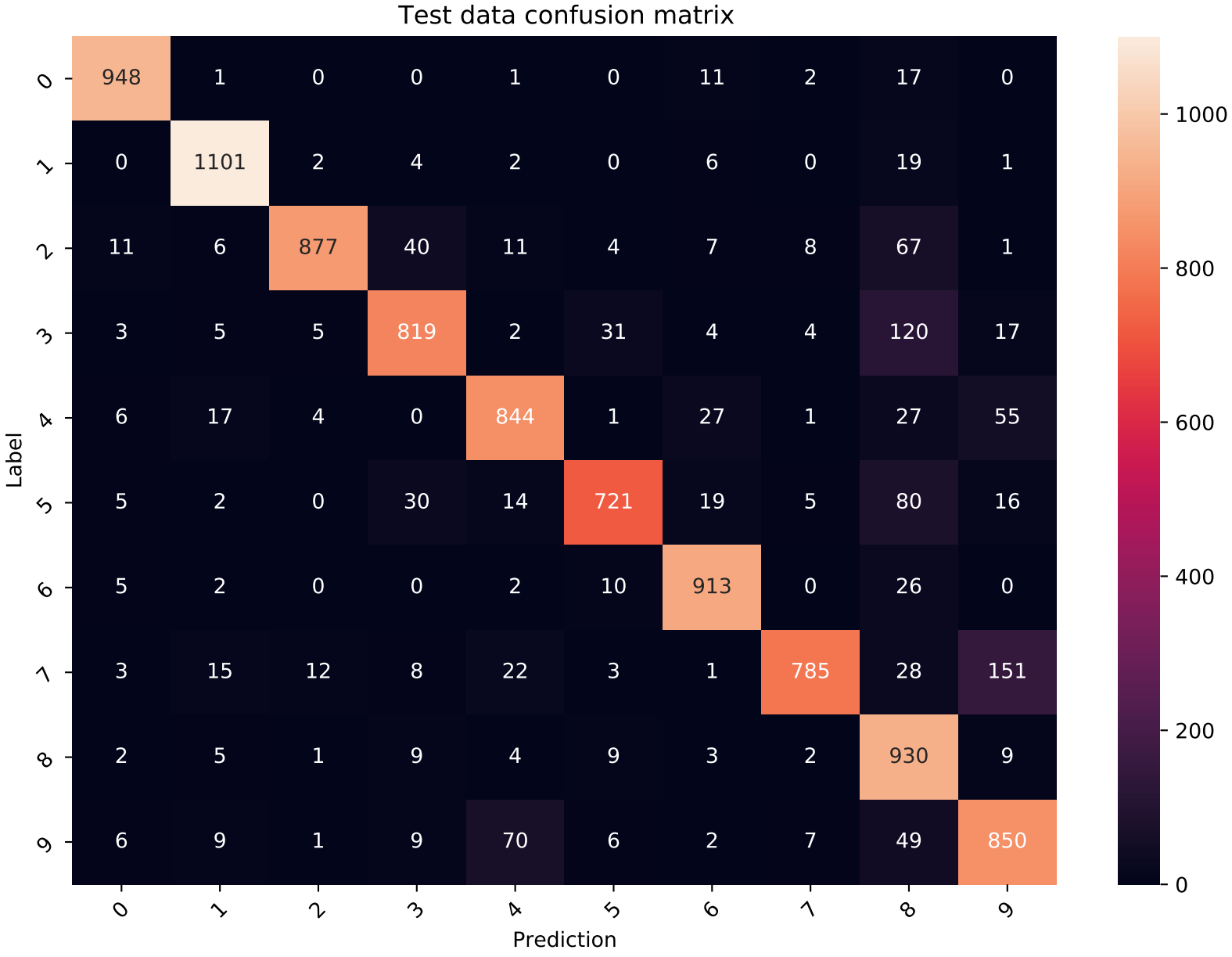
Layer (type)	Output Shape	Param #
input_1 (InputLayer)	[(None, 8, 8, 1)]	0
conv2d (Conv2D)	(None, 8, 8, 16)	160
activation (Activation)	(None, 8, 8, 16)	0
max_pooling2d (MaxPooling2D)	(None, 4, 4, 16)	0
dropout (Dropout)	(None, 4, 4, 16)	0
conv2d_1 (Conv2D)	(None, 4, 4, 32)	4640
activation_1 (Activation)	(None, 4, 4, 32)	0
max_pooling2d_1 (MaxPooling2D)	(None, 2, 2, 32)	0
dropout_1 (Dropout)	(None, 2, 2, 32)	0
conv2d_2 (Conv2D)	(None, 2, 2, 64)	18496
activation_2 (Activation)	(None, 2, 2, 64)	0
max_pooling2d_2 (MaxPooling2D)	(None, 1, 1, 64)	0
dropout_2 (Dropout)	(None, 1, 1, 64)	0
flatten (Flatten)	(None, 64)	0
dense (Dense)	(None, 10)	650
activation_3 (Activation)	(None, 10)	0

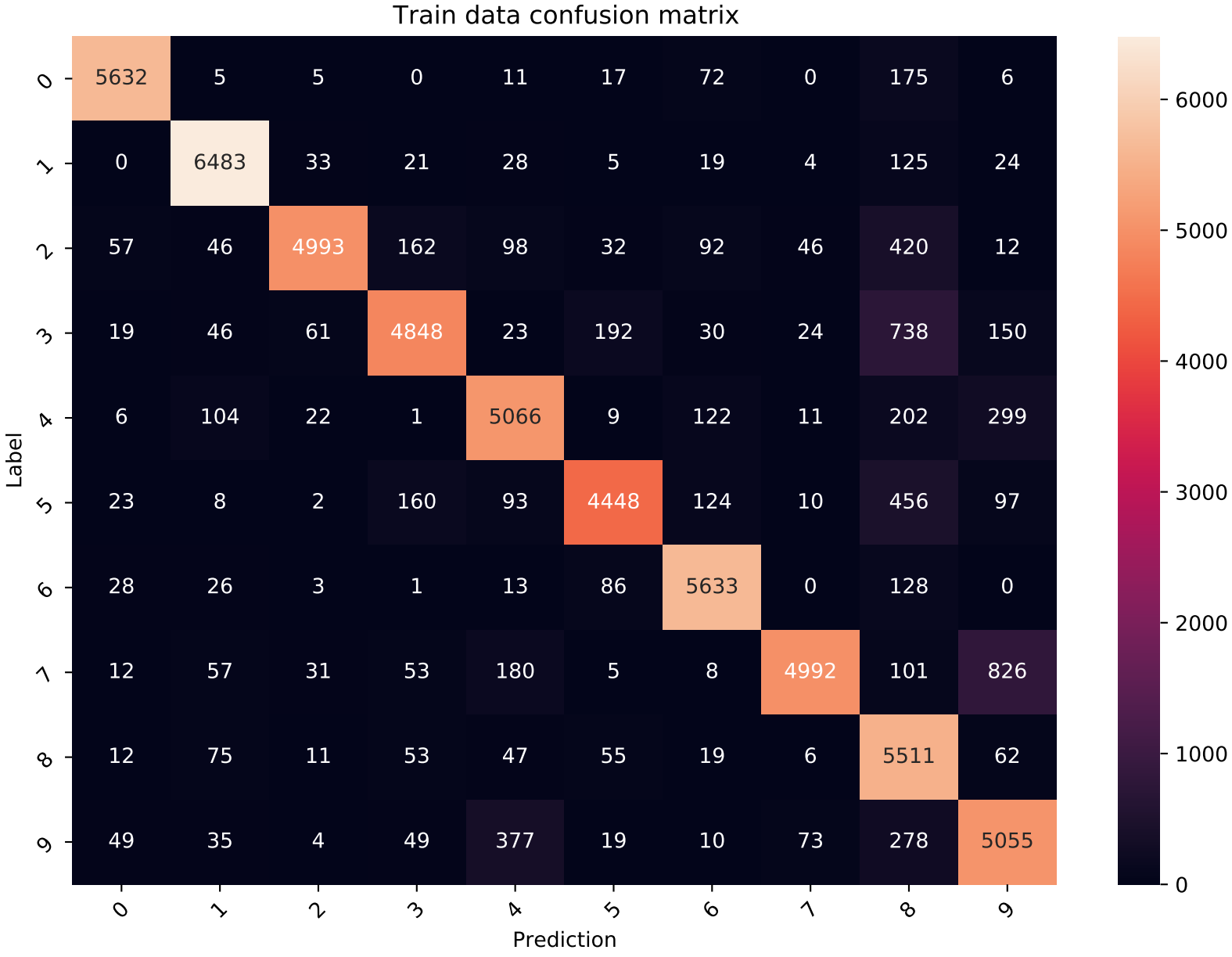
Total params: 23,946
Trainable params: 23,946
Non-trainable params: 0

Model architecture


Training losses
Training data
0.750
0.725
0.700
0.675
0.650
0.625
0.600
0.575
Loss
0
2
4
6
8
No. epoch


Model accuracy
Training data
Accuracy
0.82
0.81
0.80
0.79
0.78
0.77
0.76
0.75
0
2
4
6
8
No. epoch


Test data confusion matrix
Label
Prediction
0 1 2 3 4 5 6 7 8 9
948 1 0 0 1 0 11 2 17 0
0 1101 2 4 2 0 6 0 19 1
11 6 877 40 11 4 7 8 67 1
3 5 5 819 2 31 4 4 120 17
6 17 4 0 844 1 27 1 27 55
5 2 0 30 14 721 19 5 80 16
5 2 0 0 2 10 913 0 26 0
3 15 12 8 22 3 1 785 28 151
2 5 1 9 4 9 3 2 930 9
6 9 1 9 70 6 2 7 49 850
1000
800
600
400
200
0


Train data confusion matrix
Label
Prediction
0 5632 5 5 0 11 17 72 0 175 6
1 0 6483 33 21 28 5 19 4 125 24
2 57 46 4993 162 98 32 92 46 420 12
3 19 46 61 4848 23 192 30 24 738 150
4 6 104 22 1 5066 9 122 11 202 299
5 23 8 2 160 93 4448 124 10 456 97
6 28 26 3 1 13 86 5633 0 128 0
7 12 57 31 53 180 5 8 4992 101 826
8 12 75 11 53 47 55 19 6 5511 62
9 49 35 4 49 377 19 10 73 278 5055
0 1 2 3 4 5 6 7 8 9
6000
5000
4000
3000
2000
1000
0