

REPORT

Dataset: MnistDataset

NN architecture:

input nodes = 784

1 hidden nodes = 200

2 hidden nodes = 200

output nodes = 10

Code settings:

learning rate = 0.1

batch size = 10

epochs = 5

activation functions: Hardswish

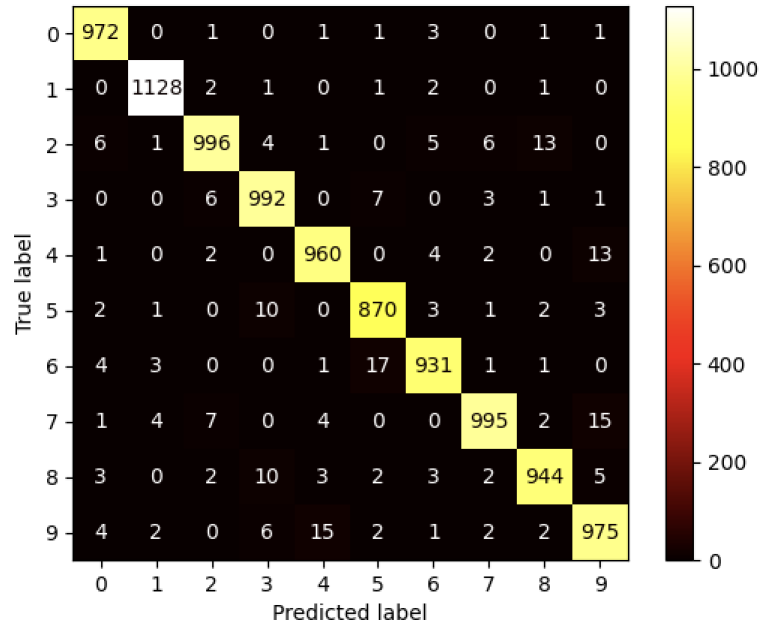
optimizer: SGD

loss function: cross-entropy loss

	per class	general
Accuracy	0 class - 0.99 1 class - 0.99 2 class - 0.97 3 class - 0.98 4 class - 0.98 5 class - 0.98 6 class - 0.97 7 class - 0.97 8 class - 0.97 9 class - 0.97	0.9763

Precision	0 class - 0.97885 1 class - 0.99034 2 class - 0.98031 3 class - 0.96969 4 class - 0.97461 5 class - 0.96666 6 class - 0.97794 7 class - 0.98320 8 class - 0.97621 9 class - 0.96248	0.97633177698
Recall	0 class - 0.99183 1 class - 0.99383 2 class - 0.96511 3 class - 0.98217 4 class - 0.97759 5 class - 0.97533 6 class - 0.97181 7 class - 0.96789 8 class - 0.96919 9 class - 0.96630	0.9763
F1-Score	0 class - 0.98530 1 class - 0.99208 2 class - 0.97265 3 class - 0.97589 4 class - 0.97610 5 class - 0.97098 6 class - 0.97486 7 class - 0.9754 8 class - 0.97269 9 class - 0.96439	0.97629053749

Confusion Matrix



Classification Report

	precision	recall	f1-score	support
0	0.98	0.99	0.99	980
1	0.99	0.99	0.99	1135
2	0.98	0.97	0.97	1032
3	0.97	0.98	0.98	1010
4	0.97	0.98	0.98	982
5	0.97	0.98	0.97	892
6	0.98	0.97	0.97	958
7	0.98	0.97	0.98	1028
8	0.98	0.97	0.97	974
9	0.96	0.97	0.96	1009
accuracy			0.98	10000
macro avg	0.98	0.98	0.98	10000
weighted avg	0.98	0.98	0.98	10000

Дані Ассурасу для кожного класу були взяті з Confusion Matrix:

