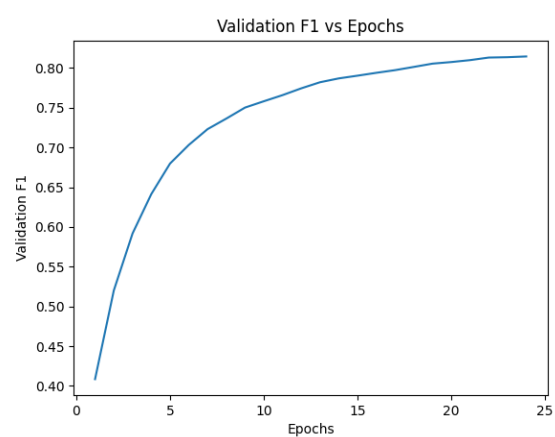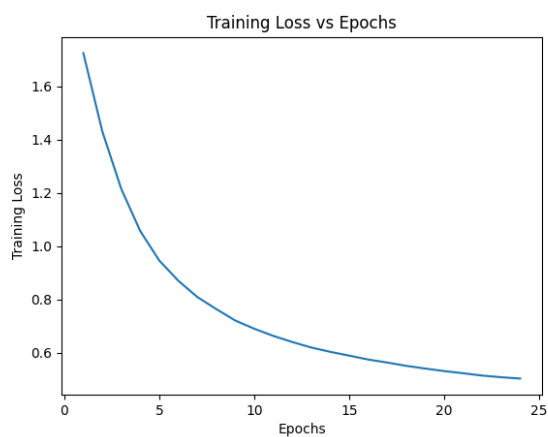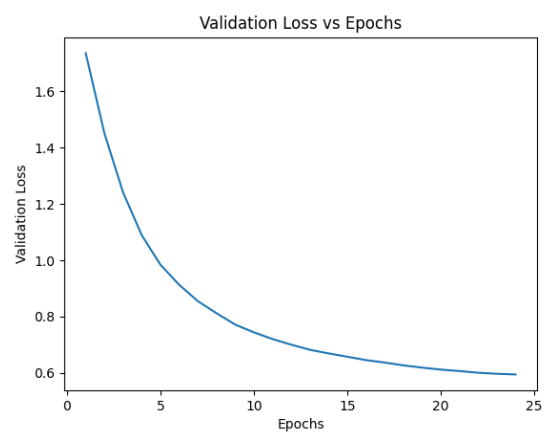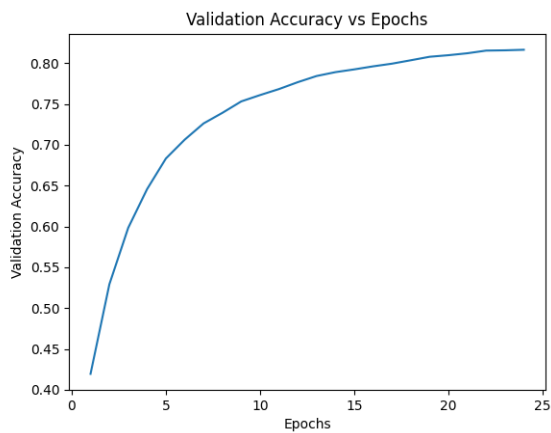CSE 472: OFFLINE 4 REPORT

Name: Iftekhar Hakim Kaowsar
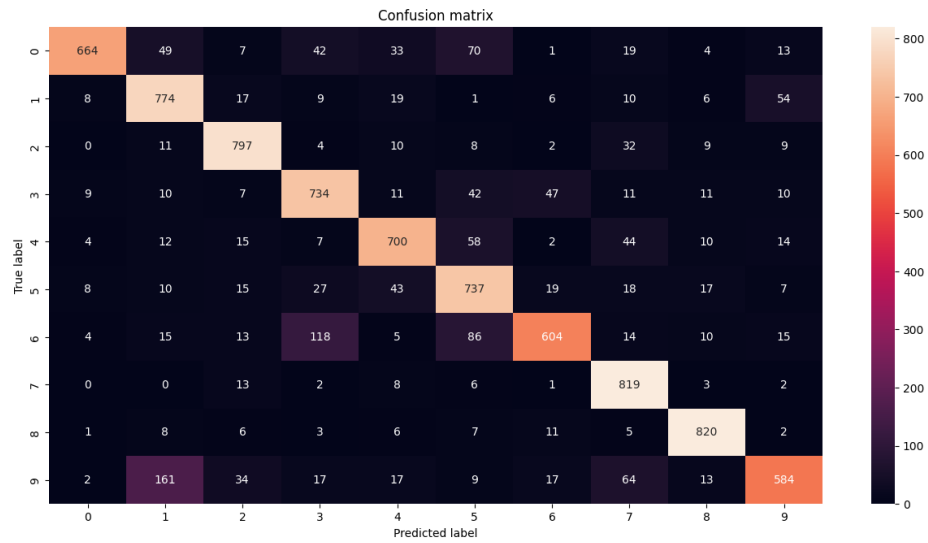ID: 1705045

Architecture 1: LeNet
Pipeline: 28 X 28 input matrix, 6 @ 5 X 5 Convolution, ReLU, 2 X 2 Maxpooling, 16 @ 5 X 5
Convolution, ReLU, 2 X 2 Maxpooling, Flattening, Fully Connected layer with output channel
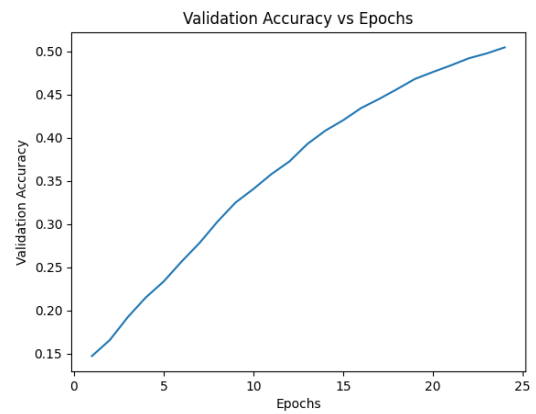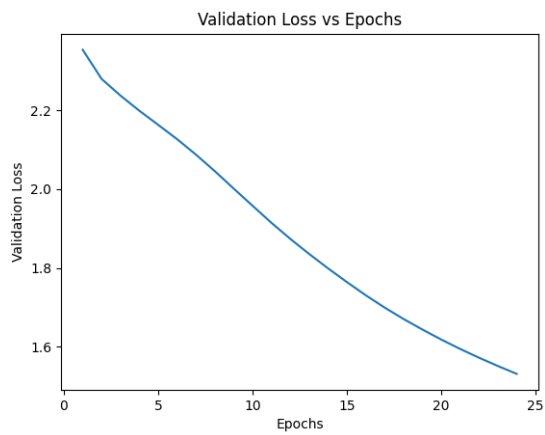120, 84, 10 and Soft Max layer.
Batch size: 16

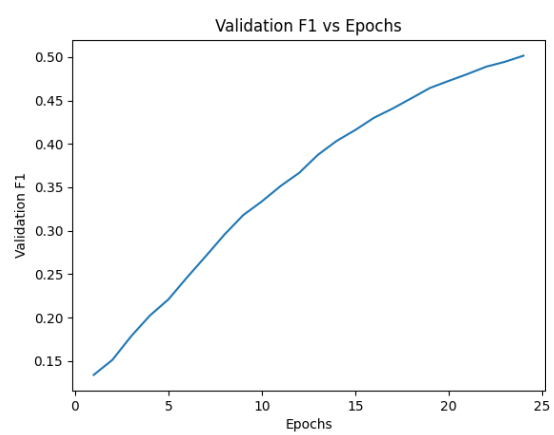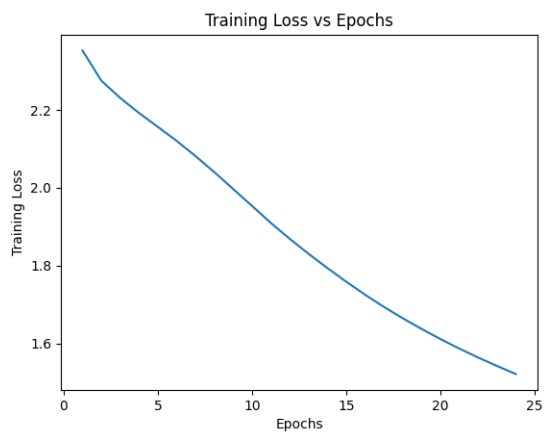**Graph for Learning-rate = 0.001 (epoch 1 to 25)**

Confusion Matrix

Confusion matrix

	0	1	2	3	4	5	6	7	8	9
0	664	49	7	42	33	70	1	19	4	13
1	8	774	17	9	19	1	6	10	6	54
2	0	11	797	4	10	8	2	32	9	9
3	9	10	7	734	11	42	47	11	11	10
4	4	12	15	7	700	58	2	44	10	14
5	8	10	15	27	43	737	19	18	17	7
6	4	15	13	118	5	86	604	14	10	15
7	0	0	13	2	8	6	1	819	3	2
8	1	8	6	3	6	7	11	5	820	2
9	2	161	34	17	17	9	17	64	13	584

True label / Predicted label

Graph for Learning-rate = 0.0001 (epoch 1 to 25)

Validation Loss vs Epochs — Validation Accuracy vs Epochs

For testing, learning rate = 0.001 was set. Testing accuracy on *'training-d'* files was ~77%.