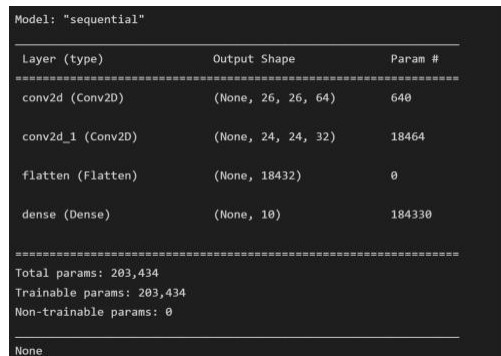
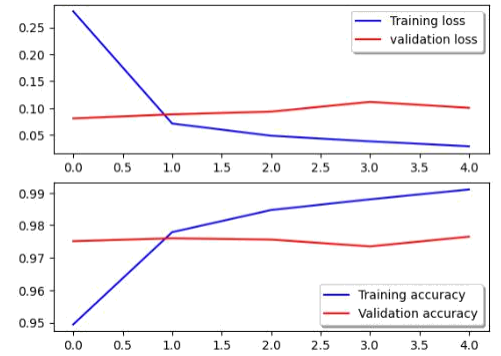


Project Development Phase Model Performance Test

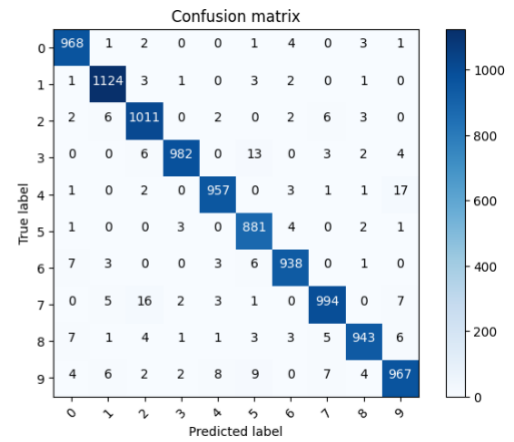
Date	16 November 2022
Team ID	PNT2022TMID15485
Project Name	Project - A Novel Method For Handwritten Digit Recognition System.
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary		 <pre> Model: "sequential" ----- Layer (type) Output Shape Param # ----- conv2d (Conv2D) (None, 26, 26, 64) 640 conv2d_1 (Conv2D) (None, 24, 24, 32) 18464 flatten (Flatten) (None, 18432) 0 dense (Dense) (None, 10) 184330 ----- Total params: 203,434 Trainable params: 203,434 Non-trainable params: 0 ----- None </pre>
2.	Accuracy	Training Accuracy - 99% Validation Accuracy - 97%	 <p>The top graph displays Training loss (blue line) and validation loss (red line) over 4 epochs. Training loss starts at approximately 0.25 and decreases to about 0.03. Validation loss starts at approximately 0.08 and increases slightly to about 0.10.</p> <p>The bottom graph displays Training accuracy (blue line) and validation accuracy (red line) over 4 epochs. Training accuracy starts at approximately 0.95 and increases to about 0.99. Validation accuracy starts at approximately 0.975 and decreases slightly to about 0.97.</p>

3. Confusion Matrix



4. Classification Report

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