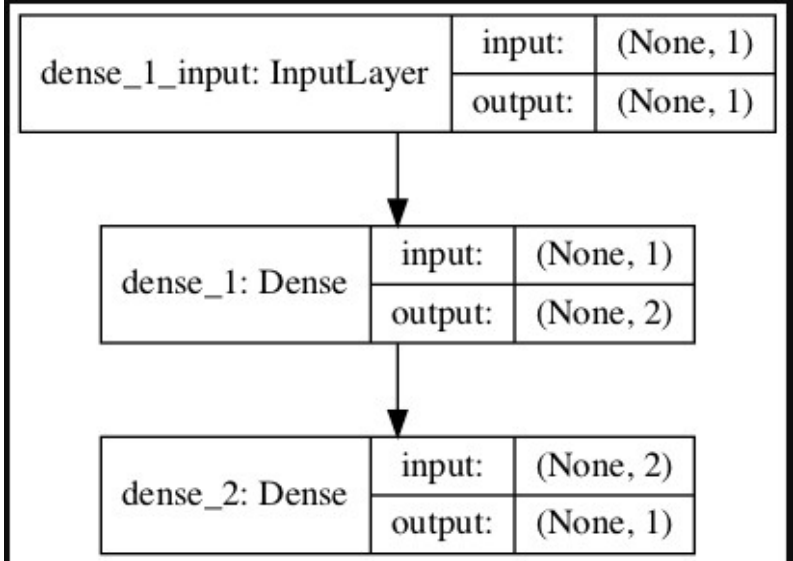


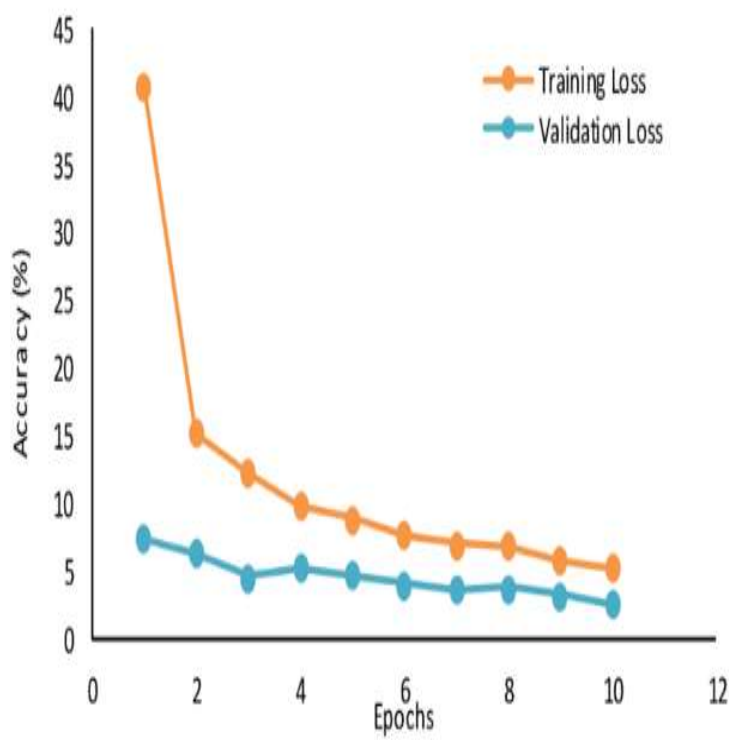
Project Development Phase
Model Performance Test

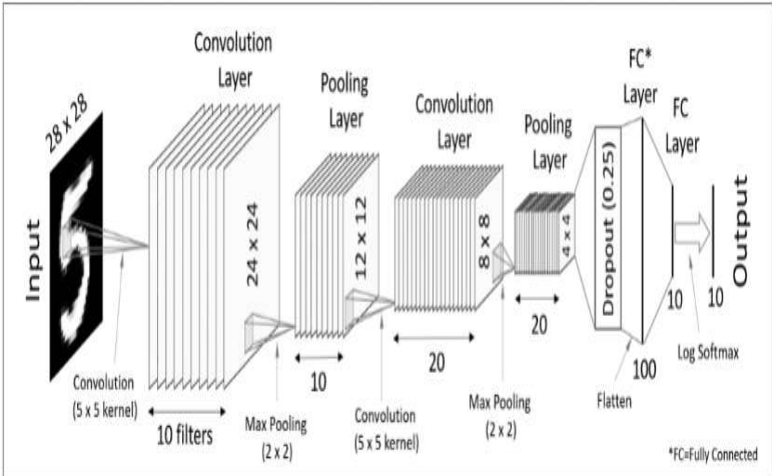
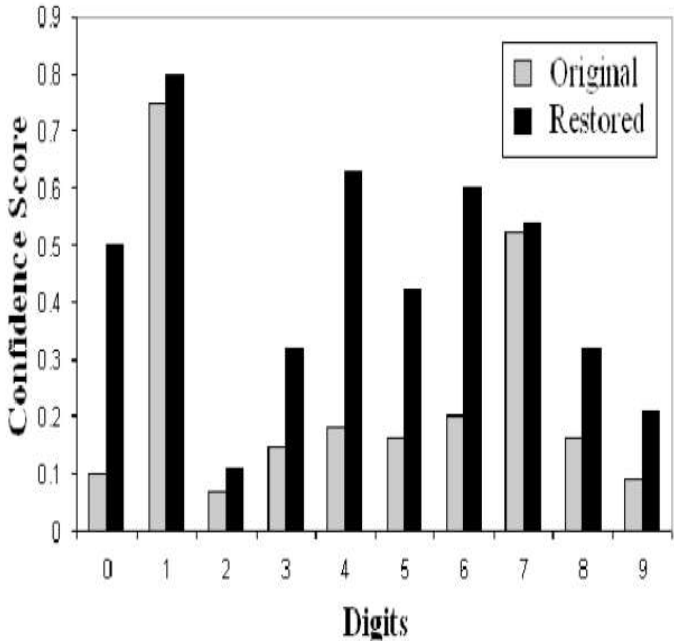
Date	10 November 2022
Team ID	PNT2022MIT13244
Project Name	A Novel Method for Handwritten Digit Recognition System
Maximum Marks	10 Marks

Model Performance Testing:

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

S.No	Parameter	Values	Screenshot
1.	Model Summary	-	 <pre> graph TD A["dense_1_input: InputLayer input: (None, 1) output: (None, 1)"] --> B["dense_1: Dense input: (None, 1) output: (None, 2)"] B --> C["dense_2: Dense input: (None, 2) output: (None, 1)"] </pre>

2.	Accuracy	Training Accuracy - Validation Accuracy -	 <p>The graph displays two metrics over 10 epochs. The orange line represents Training Loss, starting at approximately 41% at epoch 1 and decreasing to about 5.5% by epoch 10. The blue line represents Validation Loss, starting at approximately 7.5% at epoch 1 and decreasing to about 2.5% by epoch 10. Both metrics show a steady decline, with Training Loss consistently higher than Validation Loss throughout the process.</p> <table><tr><th>Epochs</th><th>Training Loss (%)</th><th>Validation Loss (%)</th></tr><tr><td>1</td><td>41</td><td>7.5</td></tr><tr><td>2</td><td>15</td><td>6.5</td></tr><tr><td>3</td><td>12</td><td>4.5</td></tr><tr><td>4</td><td>10</td><td>5.5</td></tr><tr><td>5</td><td>9</td><td>4.5</td></tr><tr><td>6</td><td>8</td><td>4</td></tr><tr><td>7</td><td>7</td><td>3.5</td></tr><tr><td>8</td><td>7</td><td>3.5</td></tr><tr><td>9</td><td>6</td><td>3</td></tr><tr><td>10</td><td>5.5</td><td>2.5</td></tr></table>	Epochs	Training Loss (%)	Validation Loss (%)	1	41	7.5	2	15	6.5	3	12	4.5	4	10	5.5	5	9	4.5	6	8	4	7	7	3.5	8	7	3.5	9	6	3	10	5.5	2.5
Epochs	Training Loss (%)	Validation Loss (%)																																		
1	41	7.5																																		
2	15	6.5																																		
3	12	4.5																																		
4	10	5.5																																		
5	9	4.5																																		
6	8	4																																		
7	7	3.5																																		
8	7	3.5																																		
9	6	3																																		
10	5.5	2.5																																		

3	Confidence Score (Only Yolo Projects)	Class Detected -	<div data-bbox="701 319 1468 793"></div> <p data-bbox="958 823 1209 850">CNN architecture in MNIST dataset</p>																																	
	Confidence Score -		<div data-bbox="690 1190 1359 1827"><table data-bbox="690 1190 1359 1827"><tr><th>Digits</th><th>Original</th><th>Restored</th></tr><tr><td>0</td><td>0.10</td><td>0.50</td></tr><tr><td>1</td><td>0.75</td><td>0.80</td></tr><tr><td>2</td><td>0.07</td><td>0.11</td></tr><tr><td>3</td><td>0.15</td><td>0.32</td></tr><tr><td>4</td><td>0.18</td><td>0.63</td></tr><tr><td>5</td><td>0.16</td><td>0.42</td></tr><tr><td>6</td><td>0.20</td><td>0.60</td></tr><tr><td>7</td><td>0.52</td><td>0.54</td></tr><tr><td>8</td><td>0.16</td><td>0.32</td></tr><tr><td>9</td><td>0.09</td><td>0.21</td></tr></table></div>	Digits	Original	Restored	0	0.10	0.50	1	0.75	0.80	2	0.07	0.11	3	0.15	0.32	4	0.18	0.63	5	0.16	0.42	6	0.20	0.60	7	0.52	0.54	8	0.16	0.32	9	0.09	0.21
Digits	Original	Restored																																		
0	0.10	0.50																																		
1	0.75	0.80																																		
2	0.07	0.11																																		
3	0.15	0.32																																		
4	0.18	0.63																																		
5	0.16	0.42																																		
6	0.20	0.60																																		
7	0.52	0.54																																		
8	0.16	0.32																																		
9	0.09	0.21																																		

