

Defense Implemented: Input Transformation

Input Transformation Approach: Combined Input Transformation

Metric	Clean	No Defense Attack	w/ Defense Attack
Loss	0.000423	0.0299	0.001
Accuracy	100%	98%	100%

Example Misclassifications:

No misclassified images for stage: Clean  
Attack: pgd\_bim\_attack  
Dataset: MNIST  
Training Epochs: 10  
Trained Clean Images: 54210  
Test Images: 140  
Accuracy: 1.00  
Precision: 1.00  
Recall: 1.00  
F1-score: 1.00  
ROC AUC score is not defined for a single class.

Number of misclassified images for No Defense Attack: 1  
Attack: pgd\_bim\_attack  
Dataset: MNIST  
Training Epochs: 10  
Adversarial Training Images: 13598  
Test Images: 140  
Accuracy: 0.98  
Precision: 0.99  
Recall: 0.99  
F1-score: 0.99  
ROC AUC Score: 1.00

Misclassifications:  
0 -> 2: 1

No misclassified images for stage: w/ Defense Attack  
Attack: pgd\_bim\_attack  
Dataset: MNIST  
Training Epochs: 10  
Retrained Clean and Adversarial Images: 67808  
Test Images: 140

Accuracy: 1.00

Precision: 1.00

Recall: 1.00

F1-score: 1.00

ROC AUC score is not defined for a single class.

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