DCT Trained on Noisy Batches

(6, 7, 2)	
Test Results	Loss: 0.0006480491138063371, MSE: 2.005107671720907e-05, Accuracy: 1.0
Inference Time	Average batch inference time over 100 runs: 0.116428 seconds Average inference time per sample (from batch): 0.000582 seconds
R2 score	0.7498

Test set predictions	Comparison of predictions and ground truth:
	Sample 1:
	  Predicted: [4 1 4 0 0 0 0 0]
	  Ground Truth: [4 1 4 0 0 0 0 0]
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	Sample 2:
	  Predicted: [4 4 6 5 4 6 0 0]
	  Ground Truth: [4 4 6 5 4 6 0 0]
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	Sample 3:
	  Predicted: [3 1 0 2 5 0 0 0]
	  Ground Truth: [3 1 0 2 5 0 0 0]
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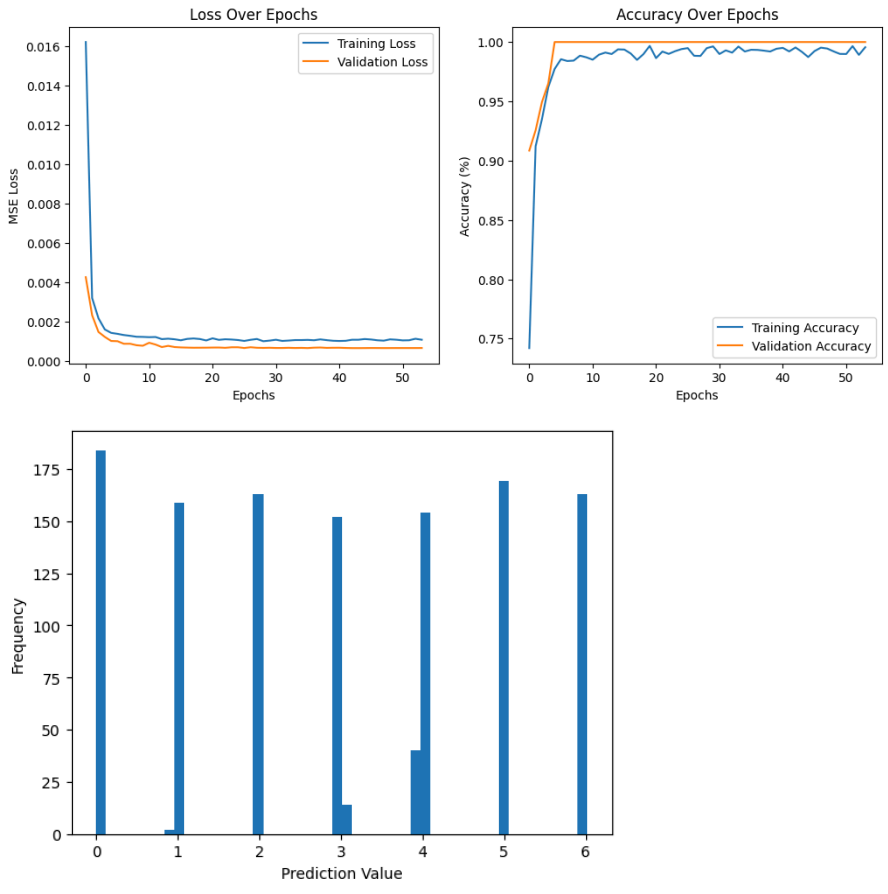
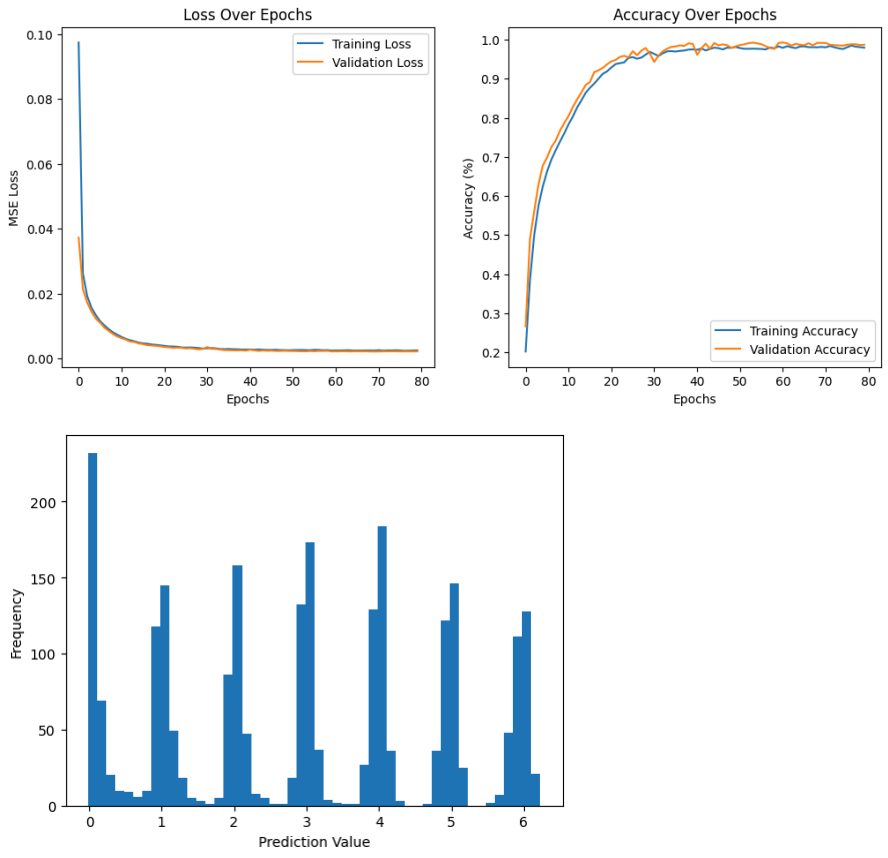
Unseen set predictions	MSE on unseen data (no noise): 0.002945594023913145 Accuracy on unseen data (no noise): 0.7583333253860474 Sample 1: Original : [6 3 4 6 2 4 0 0] NN Pred : [6 3 4 5 2 4 0 0] Sample 2: Original : [4 6 1 2 6 2 0 0] NN Pred : [4 5 1 2 5 2 0 0] Sample 3: Original : [2 4 3 2 5 4 0 0] NN Pred : [2 4 3 2 4 4 0 0]
Unseen set 2% noise	MSE on unseen data (with 2% noise): 0.0030982743483036757 Accuracy on unseen data (with 2% noise): 0.7250000238418579 Sample 1: Original : [6 3 4 6 2 4 0 0] NN Pred : [6 3 4 5 2 4 0 0]

	Sample 2: Original : [4 6 1 2 6 2 0 0] NN Pred : [4 5 1 2 5 2 0 0] Sample 3: Original : [2 4 3 2 5 4 0 0] NN Pred : [2 4 3 2 4 4 0 0]
Unseen set 5% noise	MSE on unseen data (with 5% noise): 0.003923389595001936 Accuracy on unseen data (with 5% noise): 0.7250000238418579 Sample 1: Original : [6 3 4 6 2 4 0 0] NN Pred : [6 3 4 5 2 4 0 0] Sample 2: Original : [4 6 1 2 6 2 0 0] NN Pred : [4 5 1 2 5 2 0 0] Sample 3: Original : [2 4 3 2 5 4 0 0] NN Pred : [2 4 3 2 5 4 0 0]
Graphs (Training and on Test set)	

(12, 7, 2)	
Test Results	Loss: 0.0021478913258761168, MSE: 0.0003180292260367423 3, Accuracy: 0.9918155074119568
Inference Time	Average batch inference time over 100 runs: 0.125135 seconds Average inference time per sample (from batch): 0.000626 seconds
R2 score	0.7471
Test set predictions	Comparison of predictions and ground truth: Sample 1: Predicted: [4 0 1 2 3 0 6 1 6 6 6 6 0 0 0 0] Ground Truth: [4 0 1 2 3 0 6 1 6 6 6 6 0 0 0 0] ---------- Sample 2: Predicted: [1 6 3 0 1 1 2 3 4 3 1 4 0 0 0 0] Ground Truth: [0 6 3 0 1 1 2 3 4 3 1 4 0 0 0 0] ---------- Sample 3: Predicted: [5 4 3 5 3 1 6 5 1 5 0 2 0 0 0 0] Ground Truth: [5 4 3 5 3 1 6 5 1 5 0 2 0 0 0 0] ----------
Unseen set predictions	MSE on unseen data (no noise): 0.0005812071613036096 Accuracy on unseen data (no noise): 0.9666666388511658 Sample 1: Original : [6 3 4 6 2 4 4 6 1 2 6 2 0 0 0 0] NN Pred : [5 3 4 6 2 4 4 6 1 2 6 2 0 0 0 0] Sample 2: Original : [2 4 3 2 5 4 1 3 5 5 1 3 0 0 0 0] NN Pred : [2 4 3 2 5 4 1 3 5 5 1 3 0 0 0 0] Sample 3: Original : [4 0 3 1 5 4 3 0 0 2 2 6 0 0 0 0] NN Pred : [4 0 3 1 5 4 3 0 0 2 2 6 0 0 0 0]
Unseen set 2% noise	MSE on unseen data (with 2% noise): 0.0014527710154652596 Accuracy on unseen data (with 2% noise): 0.9333333373069763 Sample 1: Original : [6 3 4 6 2 4 4 6 1 2 6 2 0 0 0 0] NN Pred : [5 2 4 6 2 4 4 6 1 2 6 2 0 0 0 0] Sample 2: Original : [2 4 3 2 5 4 1 3 5 5 1 3 0 0 0 0] NN Pred : [2 4 3 2 5 4 1 3 5 5 1 3 0 0 0 0]

	Sample 3: Original : [4 0 3 1 5 4 3 0 0 2 2 6 0 0 0 0] NN Pred : [3 0 3 1 5 4 3 0 0 2 2 6 0 0 0 0]
Unseen set 5% noise	MSE on unseen data (with 5% noise): 0.006255924701690674 Accuracy on unseen data (with 5% noise): 0.737500011920929 Sample 1: Original : [6 3 4 6 2 4 4 6 1 2 6 2 0 0 0 0] NN Pred : [4 2 4 5 2 4 4 6 1 2 6 2 0 0 0 0] Sample 2: Original : [2 4 3 2 5 4 1 3 5 5 1 3 0 0 0 0] NN Pred : [2 3 4 2 5 4 1 3 5 5 1 3 0 0 0 0] Sample 3: Original : [4 0 3 1 5 4 3 0 0 2 2 6 0 0 0 0] NN Pred : [3 1 3 1 5 3 3 0 0 2 2 6 0 0 0 0]
Graphs (Training and on Test set)	

(27, 7, 2)	
Test Results	Loss: 0.023422034457325935, MSE:

	0.02120308391749859, Accuracy: 0.7663689851760864
Inference Time	Average batch inference time over 100 runs: 0.123209 seconds Average inference time per sample (from batch): 0.000616 seconds
R2 score	0.6838

Test set predictions	Comparison of predictions and ground truth:
	Sample 1:
	  Predicted: [3 3 3 3 3 3 2 2 6 2 3 1 4 0 3 2 5 1 4 3 4 4 6 5 2 3 1 0 0 0 0 0]
	  Ground Truth: [5 6 5 1 3 4 1 1 6 2 3 1 4 0 3 2 5 1 4 3 4 4 6 5 2 3 1 0 0 0 0 0]
	---------- 	
	Sample 2:
	  Predicted: [3 3 3 3 3 3 2 5 5 2 4 3 3 1 3 1 1 2 0 1 1 5 2 1 4 0 4 0 0 0 0 0]
	  Ground Truth: [1 4 1 3 3 3 0 5 5 2 4 3 3 1 3 1 1 2 0 1 1 5 2 1 4 0 4 0 0 0 0 0]
	---------- 	
	Sample 3:
	  Predicted: [3 3 3 3 3 3 3 4 2 6 4 1 0 5 2 3 5 1 4 6 0 4 3 2 3 4 4 0 0 0 0 0]
	  Ground Truth: [2 6 0 2 2 1 3 4 2 6 4 1 0 5 2 3 5 1 4 6 0 4 3 2 3 4 4 0 0 0 0 0]
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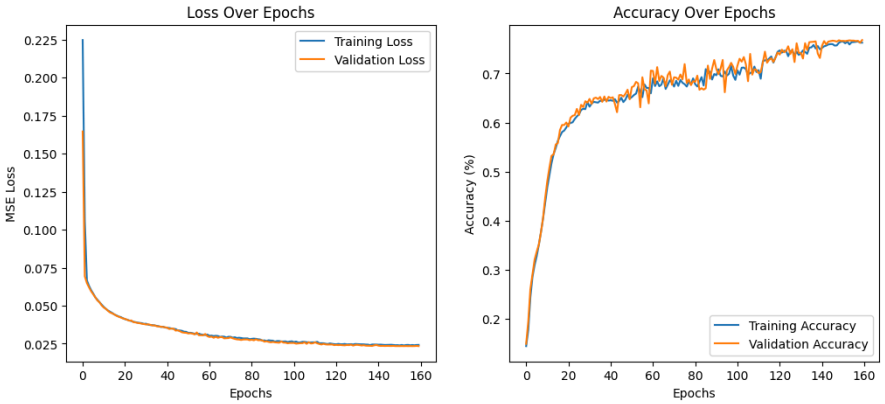
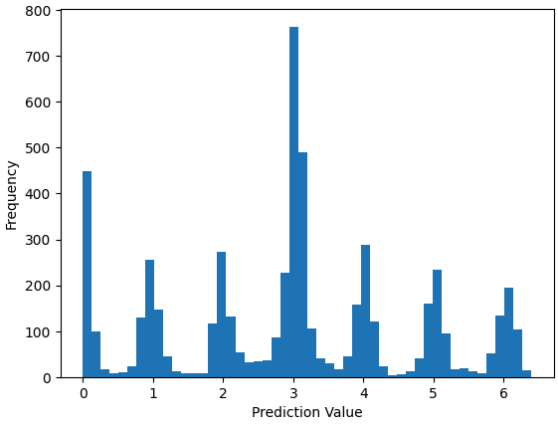
Unseen set predictions	MSE on unseen data (no noise): 0.022840730845928192 Accuracy on unseen data (no noise): 0.7740740776062012 Sample 1: Original : [6 3 4 6 2 4 4 6 1 2 6 2 2 4 3 2 5 4 1 3 5 5 1 3 4 0 3 0 0 0 0 0] NN Pred : [3 3 3 3 3 3 4 5 1 2 6 2 2 4 3 2 5 4 1 3 5 5 1 3 4 0 3 0 0 0 0 0] Sample 2: Original : [1 5 4 3 0 0 2 2 6 1 3 3 6 5 5 6 5 2 3 6 3 0 2 4 2 6 4 0 0 0 0 0] NN Pred : [3 3 3 3 3 3 2 3 2 6 1 3 3 6 5 5 6 5 2 3 6 3 0 2 4 2 6 4 0 0 0 0 0] Sample 3: Original : [0 6 1 3 0 3 5 1 1 0 1 4 1 3 3 6 3 6 3 4 6 2 5 0 3 1 3 0 0 0 0 0] NN Pred : [3 3 3 3 3 3 3 4 2 1 0 1 4 1 3 3 6 3 6 3 4 6 2 5 0 3 1 3 0 0 0 0 0]
Unseen set 2% noise	MSE on unseen data (with 2% noise): 0.05940413475036621 Accuracy on unseen data (with 2% noise): 0.5518518686294556

	Sample 1: Original : [6 3 4 6 2 4 4 6 1 2 6 2 2 4 3 2 5 4 1 3 5 5 1 3 4 0 3 0 0 0 0 0] NN Pred : [3 3 3 3 3 2 3 0 2 0 6 2 1 3 3 2 5 4 1 3 5 5 1 3 4 0 3 0 0 0 0 0] Sample 2: Original : [1 5 4 3 0 0 2 2 6 1 3 3 6 5 5 6 5 2 3 6 3 0 2 4 2 6 4 0 0 0 0 0] NN Pred : [3 3 3 3 3 4 6 4 4 1 4 5 1 6 5 5 4 2 3 6 3 0 2 4 2 6 4 0 0 0 0 0] Sample 3: Original : [0 6 1 3 0 3 5 1 1 0 1 4 1 3 3 6 3 6 3 4 6 2 5 0 3 1 3 0 0 0 0 0] NN Pred : [3 3 3 3 3 2 4 3 1 0 0 5 2 3 3 6 3 6 3 4 6 2 5 0 3 1 3 0 0 0 0 0]
Unseen set 5% noise	MSE on unseen data (with 5% noise): 0.21250486373901367 Accuracy on unseen data (with 5% noise): 0.44999998807907104 Sample 1: Original : [6 3 4 6 2 4 4 6 1 2 6 2 2 4 3 2 5 4 1 3 5 5 1 3 4 0 3 0 0 0 0 0] NN Pred : [3 3 3 3 3 1 2 0 4 0 6 3 0 3 3 2 4 3 1 2 5 5 1 3 4 0 3 0 0 0 0 0] Sample 2: Original : [1 5 4 3 0 0 2 2 6 1 3 3 6 5 5 6 5 2 3 6 3 0 2 4 2 6 4 0 0 0 0 0] NN Pred : [3 3 3 3 3 0 5 2 4 1 5 1 4 1 5 4 3 1 3 6 3 0 2 4 2 6 4 0 0 0 0 0] Sample 3: Original : [0 6 1 3 0 3 5 1 1 0 1 4 1 3 3 6 3 6 3 4 6 2 5 0 3 1 3 0 0 0 0 0] NN Pred : [3 4 3 3 3 1 5 6 1 0 0 6 3 4 3 5 2 6 3 4 6 2 5 0 3 1 3 0 0 0 0 0]
Graphs (Training and on Test set)	

(48, 13, 2)	
Test Results	`Loss: 0.03573330491781235, MSE: 0.035258110612630844, Accuracy: 0.4640066921710968`
Inference Time	`Average batch inference time over 100 runs: 0.149461 seconds` `Average inference time per sample (from batch): 0.000747 seconds`
R2 score	`0.3938`

Test set predictions	`Comparison of predictions and ground truth:`
	`Sample 1:`
	`  Predicted:  [ 6  6  6  6  6  6  6  6  6  6  7  6 6  6  6  6  6  7  6  7  6  6  4  8`
	`  4 10 12 12  7  3  3  1  0  0  2  5  6 12  8  4  8 7  0 10 11  2  7  8`
	`  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]`
	`  Ground Truth: [ 6  6  0  9  4  7  7  2  2  6  3  5 8  9  1  1  5  2  0  1 12  6  3 11`
	`  1 10 11 11  7  3  3  1  0  0  2  5  6 12  8  4  8 7  0 10 11  2  7  8`
	`  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]`
	`----------------------------------------`
	`Sample 2:`
	`  Predicted:  [ 6  6  6  6  6  6  6  6  6  6  6  6 6  6  6  7  5  6  6  6  5  5  6  6`
	`  4  2 10  4 13 12 12  1  0  9  4  1  9  3  2  6  0 9 11 11  3  6 10  9`
	`  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]`
	`  Ground Truth: [ 0 10  3  8  3  0  3  6  2  9  5  0 10  3  2  0  2  3  4  5  1  1  5  4`
	`  0  2 10  4 12 11 11  1  0  8  4  1  9  3  2  6  0 9 11 11  3  6 10  9`
	`  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]`
	`----------------------------------------`

	Sample 3:
	  Predicted: [6 6 7 6 7 6 6 7 6 6 6 6
	6 6 6 6 6 6 6 6 6 7 6 5
	  6 13 4 2 4 9 6 6 8 7 3 4 4 9 11 1 11
	6 6 8 12 8 3 4
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
	  Ground Truth: [2 12 10 4 3 0 0 6 3 0 5 10
	11 10 11 10 10 0 7 11 12 8 10 2
	  6 12 4 2 4 9 6 6 8 7 3 4 4 9 11 1 11
	6 6 8 12 8 3 4
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
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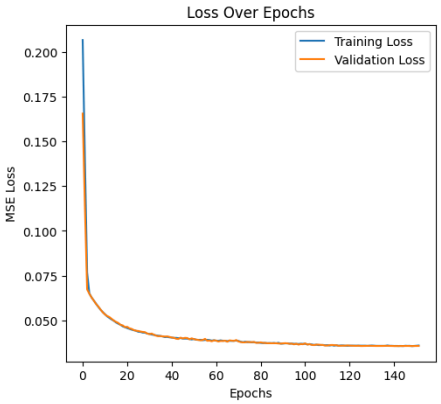
Unseen set predictions	MSE on unseen data (no noise): 0.03872190788388252
	Accuracy on unseen data (no noise):
	0.2510416805744171
	
	Sample 1:
	Original : [6 3 12 10 7 12 4 6 9 2 6 10 10
	7 4 3 7 7 2 5 4 1 7 11
	  5 1 11 4 0 11 9 5 12 11 8 0 10 10 9 11 11
	2 11 6 3 8 2 4
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
	NN Pred : [6 6 6 6 7 6 6 6 6 6 6 6 6
	7 6 7 7 5 7 5 5 6 7 9
	  6 1 0 4 0 12 9 5 0 12 9 0 12 11 10 12 12
	2 12 7 3 9 2 4
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
	
	Sample 2:
	Original : [2 6 4 8 6 1 3 8 11 1 9 8 9
	4 1 3 11 11 6 11 12 7 2 0
	  3 1 7 3 1 5 5 9 3 5 12 1 9 11 1 9 3
	7 6 11 8 7 4 12
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
	NN Pred : [6 6 6 6 6 6 6 6 6 6 6 6 7
	5 6 6 6 6 7 6 6 5 4
	  5 1 8 3 1 6 6 10 3 6 1 1 10 12 1 10 3
	8 6 12 9 7 4 0
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
	
	Sample 3:
	Original : [1 4 7 9 8 11 11 11 12 8 12 12 0
	8 6 8 7 0 11 7 7 10 2 0
	  7 2 2 0 10 4 9 6 9 8 11 6 8 7 11 1 0
	6 6 7 4 2 11 7
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
	NN Pred : [6 6 6 6 6 6 6 6 7 6 6 6 6
	6 6 7 5 6 6 6 6 6 6 4
	  7 2 2 0 11 4 10 6 10 9 12 6 9 8 12 1 0
	7 7 8 4 2 12 8
	  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]

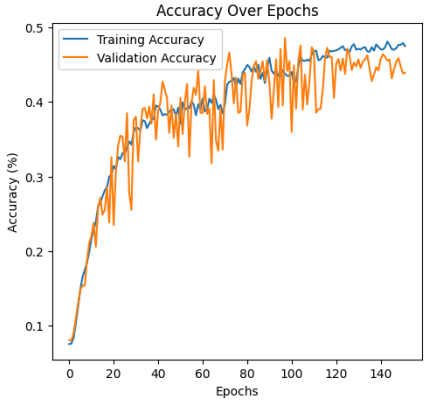
Unseen set 2% noise	MSE on unseen data (with 2% noise): 0.10115134716033936

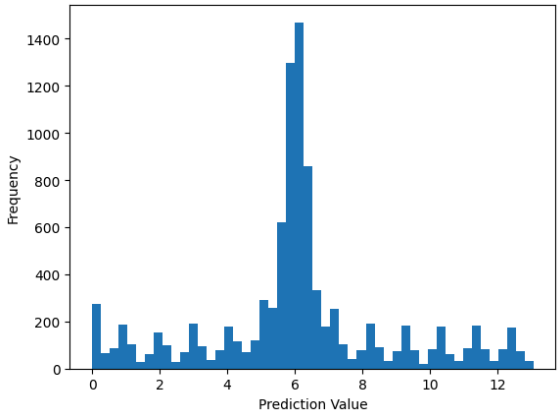
	Accuracy on unseen data (with 2% noise): 0.18854166567325592 Sample 1: Original : [6 3 12 10 7 12 4 6 9 2 6 10 10 7 4 3 7 7 2 5 4 1 7 11 5 1 11 4 0 11 9 5 12 11 8 0 10 10 9 11 11 2 11 6 3 8 2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [6 6 6 6 7 6 6 6 7 6 6 6 6 7 6 6 7 4 6 5 4 6 1 0 1 0 0 4 0 1 9 6 4 1 10 1 11 12 10 0 0 2 12 7 3 9 2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Sample 2: Original : [2 6 4 8 6 1 3 8 11 1 9 8 9 4 1 3 11 11 6 11 12 7 2 0 3 1 7 3 1 5 5 9 3 5 12 1 9 11 1 9 3 7 6 11 8 7 4 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [6 6 6 6 6 6 6 6 5 6 6 6 7 5 6 5 7 7 7 5 8 1 9 1 3 8 11 0 5 5 4 7 4 3 1 2 10 12 2 10 2 8 6 12 9 7 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Sample 3: Original : [1 4 7 9 8 11 11 11 12 8 12 12 0 8 6 8 7 0 11 7 7 10 2 0 7 2 2 0 10 4 9 6 9 8 11 6 8 7 11 1 0 6 6 7 4 2 11 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [6 6 6 6 6 6 6 6 7 7 6 7 7 6 6 7 5 7 7 5 7 0 0 2 3 2 12 0 0 9 8 2 9 8 12 8 10 8 12 1 0 7 6 8 4 2 12 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
Unseen set 5% noise	MSE on unseen data (with 5% noise): 0.3823394179344177 Accuracy on unseen data (with 5% noise): 0.16770833730697632 Sample 1: Original : [6 3 12 10 7 12 4 6 9 2 6 10 10 7 4 3 7 7 2 5 4 1 7 11 5 1 11 4 0 11 9 5 12 11 8 0 10 10 9 11 11 2 11 6 3 8 2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [6 6 6 6 7 6 6 6 7 6 6 6 7 6 6 6 7 3 4 4 3 6 0 0 0 0 0 5 0 4 8 8 8 3 11 4 11 0 11 0 0 2 12 7 3 9 2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]

```
Sample 2:
Original : [ 2  6  4  8  6  1  3  8 11  1  9  8  9
4  1  3 11 11  6 11 12  7  2  0
  3  1  7  3  1  5  5  9  3  5 12  1  9 11  1  9  3
7  6 11  8  7  4 12
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]
NN Pred  : [ 6  6  5  6  6  5  5  6  5  5  5  6  7
4  5  4  7  9  8  2 11  0  3  0
  1  5  3 12 11  3  1  4  6  0  2  3 11 11  3 10  1
8  6 12  8  7  4  0
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]

Sample 3:
Original : [ 1  4  7  9  8 11 11 11 12  8 12 12  0
8  6  8  7  0 11  7  7 10  2  0
  7  2  2  0 10  4  9  6  9  8 11  6  8  7 11  1  0
6  6  7  4  2 11  7
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]
NN Pred  : [ 6  6  6  6  6  7  7  6  7  7  7  7  7
6  7  8  5  9  8  4  9 11 10 12
  1  8  9  0  0  3  5  0  8  8 11 10 12  8 11  1  1
6  6  7  4  2 12  7
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0]
```

Graphs (Training and on Test set)







(96, 19, 2)	
Test Results	Loss: 0.049418143928050995, MSE: 0.04912104085087776, Accuracy: 0.2727399468421936
Inference Time	Average batch inference time over 100 runs: 0.192682 seconds Average inference time per sample (from batch): 0.000963 seconds
R2 score	0.2257
Test set predictions	Comparison of predictions and ground truth: Sample 1: Predicted: [9 9 9 9 9 9 9 8 9 9 9 9 9 9 8 8 9 9 9 9 9 9 9 8 8 8 9 9 8 10 9 8 9 9 10 8 10 9 9 9 8 9 9 9 9 9 9 10 9 9 9 10 9 10 9 9 11 9 9 9 10 8 10 9 8 8 8 4 7 11 7 14 13 4 16 9 14 12 3 12 12 10 4 13 2 17 2 5 7 16 1 6 17 2 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Ground Truth: [7 3 9 9 7 13 3 2 2 3 11 17 18 10 17 13 10 13 2 1 8 7 4 8 4 12 10 10 11 18 12 8 3 6 4 6 7 13 9 5 4 14 15 1 14 7 12 16 14 13 18 12 6 7 6 18 14 6 16 17 18 2 6 9 6 10 2 8 3 7 11 7 14 13 4 16 10 14 12 3 12 12 10 4 13 2 17 2 5 7 16 0 6 17 3 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] ---------- Sample 2: Predicted: [9 10 9 9 9 8 9 9 10 9 9 9 9 9 9 8 9 9 9 9 9 9 8 9 9 9 9 8 9 9 10 10 9 9 9 10 9 8 9 9 9 9 9 9 9 9 9 10 9 8 10 9 10 10 9 9 9 10 9 9 9 10 10 9 9 9 3 10 11 4 18 7 14 2 16 11 1 12 18 12 17 16 9 7 1 4 3 1 15 5 18 4 5 6 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Ground Truth: [2 8 8 4 18 15 15 17 11 15 4 2 6 13 15 0 4 7 1 6 5 9 2 5 18 1 18 16 3 2 13 2 10 9 2 8 15 17 4 14 15 17 5 3 12 0 1 14 3 12 13 14 7 8 4 2 6 7 15 16 9 0 18 17 17 4 10 0 10 10 4 17

	7 14 2 15 11 1 12 18 12 17 15 9 6 1 3 3 0 15 5 18 4 5 6 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] ---------- Sample 3: Predicted: [9 9 9 9 9 8 10 9 8 8 9 9 8 9 9 8 7 10 9 9 9 10 9 9 8 9 9 9 8 9 9 9 10 9 8 9 9 9 8 8 9 8 9 10 9 8 8 9 10 8 9 10 10 9 10 9 9 11 9 10 9 10 9 10 9 8 8 11 5 18 14 14 15 2 5 3 0 17 7 15 15 14 1 11 3 10 1 5 16 18 8 4 13 15 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Ground Truth: [10 3 13 3 3 1 6 18 0 11 18 11 8 6 0 5 9 0 17 2 10 13 5 10 6 7 4 17 14 17 2 9 14 7 7 13 9 12 9 5 17 15 17 5 8 15 5 10 2 7 0 14 14 18 9 18 8 6 13 1 12 3 6 7 15 8 10 13 3 18 14 13 15 2 5 3 0 17 7 15 15 14 1 11 3 10 1 5 16 18 8 4 13 15 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] ----------
Unseen set predictions	MSE on unseen data (no noise): 0.05059583857655525 Accuracy on unseen data (no noise): 0.15937499701976776 Sample 1: Original : [6 14 10 7 6 18 10 10 3 7 2 1 11 5 1 0 11 11 16 9 15 14 14 18 11 2 4 18 6 8 6 17 3 13 17 8 1 14 6 11 7 14 2 13 16 3 17 7 3 1 5 9 3 17 11 1 9 3 13 15 14 7 13 7 15 12 17 14 12 8 14 12 0 6 8 0 11 7 10 18 16 7 2 2 0 4 9 6 8 6 8 7 11 1 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [9 10 9 9 9 9 9 9 9 9 9 9 9 9 8 8 8 9 9 9 9 8 8 9 9 9 9 8 8 8 9 9 10 9 8 11 9 10 8 10 9 9 9 9 10 9 9 9 11 9 9 10 10 10 10 9 9 9 10 10 9 9 9 9 8 8 9 12 12 9 15 11 2 6 8 1 11 6 10 16 15 7 2 2 0 4 9 6 8 6 8 7 10 1 1 14

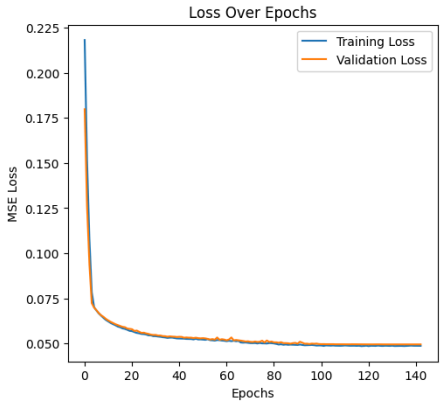
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Sample 2: Original : [4 2 11 7 2 0 2 4 14 13 2 0 4 13 6 8 14 14 9 12 18 6 16 3 4 6 12 14 10 3 12 6 18 1 9 12 5 11 11 10 6 0 0 12 8 2 6 5 7 8 4 0 18 9 11 14 8 16 16 11 6 1 2 16 4 16 16 16 1 1 4 0 0 18 1 11 5 3 10 16 5 4 1 5 10 15 15 0 8 5 15 2 3 18 2 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [9 9 9 9 9 9 9 9 9 9 9 9 9 10 8 8 9 9 9 9 9 9 9 9 8 9 9 9 9 8 10 9 9 10 9 11 8 10 10 9 10 9 10 9 10 9 9 10 10 9 10 9 10 9 10 10 9 11 9 9 9 9 8 9 9 8 8 15 4 2 5 1 2 17 1 10 5 3 9 15 5 4 1 5 9 13 14 0 7 5 14 2 2 17 1 17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Sample 3: Original : [6 8 0 7 6 17 7 0 10 17 9 2 6 15 15 16 1 0 15 11 4 4 8 8 2 18 15 15 2 0 10 16 7 3 5 7 2 15 2 17 13 17 1 2 15 8 3 0 3 0 13 15 7 6 2 16 0 15 11 18 13 5 5 12 18 7 1 0 14 0 4 15 18 3 2 16 16 11 13 5 2 8 4 16 13 2 0 0 2 17 9 2 7 13 17 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [9 9 9 9 9 9 9 9 9 9 9 8 9 9 9 9 8 9 9 9 9 9 9 8 9 10 8 9 9 9 9 10 9 10 9 9 10 9 9 9 9 9 9 9 9 9 9 9 9 9 10 10 9 9 9 9 9 9 8 8 9 9 9 10 9 8 5 13 2 6 15 17 4 3 15 15 10 13 4 2 7 4 15 12 2 0 0 2 16 8 2 6 12 15 13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
Unseen set 2% noise	MSE on unseen data (with 2% noise): 0.23621729016304016 Accuracy on unseen data (with 2% noise):

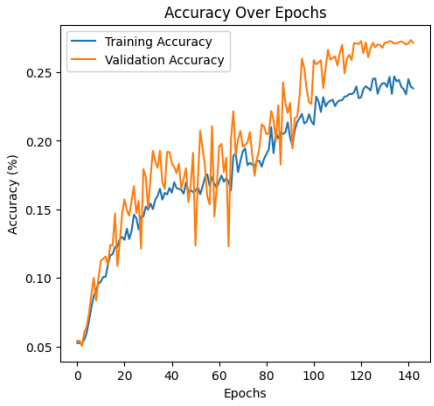
```
0.09166666865348816

Sample 1:
Original : [ 6 14 10  7  6 18 10 10  3  7  2  1 11
5  1  0 11 11 16  9 15 14 14 18
 11  2  4 18  6  8  6 17  3 13 17  8  1 14  6 11  7
14  2 13 16  3 17  7
  3  1  5  9  3 17 11  1  9  3 13 15 14  7 13  7 15
12 17 14 12  8 14 12
  0  6  8  0 11  7 10 18 16  7  2  2  0  4  9  6  8
6  8  7 11  1  0 15
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]
NN Pred  : [ 9 10  9  9  9  9  9  9  9  9  9  8  9
9  8  8  8  9  9  9  9  8  8  9
 10  9  9  9  8  8  8 12 10 11  8 10  9 10  8  9 10
9  9  9 10  9  8  9
 11  8  9 10 10 10 10  9  9  9  9 10  9 10  9  9  8
9  7 18 11  2  1 17
  1  9 16 17 16 11  6  3 18  9  3  3  1  4  9  6  8
6  8  6 10  1  1 13
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]

Sample 2:
Original : [ 4  2 11  7  2  0  2  4 14 13  2  0  4
13  6  8 14 14  9 12 18  6 16  3
  4  6 12 14 10  3 12  6 18  1  9 12  5 11 11 10  6
0  0 12  8  2  6  5
  7  8  4  0 18  9 11 14  8 16 16 11  6  1  2 16  4
16 16 16  1  1  4  0
  0 18  1 11  5  3 10 16  5  4  1  5 10 15 15  0  8
5 15  2  3 18  2 18
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]
NN Pred  : [ 9  9  9  9  8  9  9  8  9  9  9  9  9
10  9  8 10  9  9  9  9  9  9 10
  9  9  9  9  9  8  8 10  9 10  9 10  9 11 10  9 11
10 10 10 10  9  9 10
 11 10  9  9 10  9 10  9  9 10  8 10  9  9  9  9  8
8 10  4  1 18  0 13
  7  2  0  8  0  2  5 17  1  2  1  6 10 13 14  0  7
4 14  2  2 17  1 16
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]

Sample 3:
Original : [ 6  8  0  7  6 17  7  0 10 17  9  2  6
15 15 16  1  0 15 11  4  4  8  8
  2 18 15 15  2  0 10 16  7  3  5  7  2 15  2 17 13
17  1  2 15  8  3  0
```

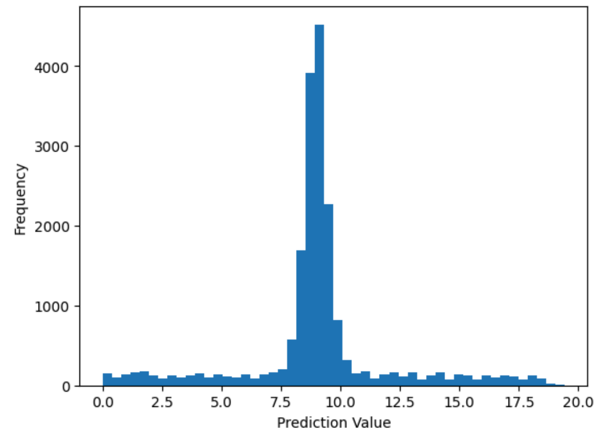
	3 0 13 15 7 6 2 16 0 15 11 18 13 5 5 12 18 7 1 0 14 0 4 15 18 3 2 16 16 11 13 5 2 8 4 16 13 2 0 0 2 17 9 2 7 13 17 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [9 9 9 9 9 9 8 9 8 8 8 8 8 8 8 8 9 9 8 8 9 9 8 9 9 8 8 9 10 7 10 10 9 9 9 10 8 7 7 7 8 8 8 8 8 9 8 7 9 9 9 9 9 9 9 8 8 7 8 9 9 9 11 10 11 14 4 0 1 12 2 8 9 8 4 2 4 11 6 13 5 16 13 3 1 1 2 16 9 1 6 11 15 13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
Unseen set 5% noise	MSE on unseen data (with 5% noise): 1.1750763654708862 Accuracy on unseen data (with 5% noise): 0.08697916567325592 Sample 1: Original : [6 14 10 7 6 18 10 10 3 7 2 1 11 5 1 0 11 11 16 9 15 14 14 18 11 2 4 18 6 8 6 17 3 13 17 8 1 14 6 11 7 14 2 13 16 3 17 7 3 1 5 9 3 17 11 1 9 3 13 15 14 7 13 7 15 12 17 14 12 8 14 12 0 6 8 0 11 7 10 18 16 7 2 2 0 4 9 6 8 6 8 7 11 1 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] NN Pred : [9 9 9 9 8 9 9 9 9 9 8 8 8 9 9 7 7 9 9 9 9 9 8 9 10 9 9 9 8 8 7 16 11 12 8 9 8 10 8 9 11 8 9 9 9 9 7 9 11 7 8 10 10 9 10 9 9 10 9 9 8 10 9 9 8 10 5 18 18 1 9 6 0 4 9 3 5 17 1 10 5 11 4 4 2 4 9 6 8 6 8 6 10 1 1 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0] Sample 2: Original : [4 2 11 7 2 0 2 4 14 13 2 0 4 13 6 8 14 14 9 12 18 6 16 3 4 6 12 14 10 3 12 6 18 1 9 12 5 11 11 10 6 0 0 12 8 2 6 5 7 8 4 0 18 9 11 14 8 16 16 11 6 1 2 16 4 16 16 16 1 1 4 0

```
  0 18  1 11  5  3 10 16  5  4  1  5 10 15 15  0  8
5 15  2  3 18  2 18
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]
NN Pred  : [ 9  9  9  9  8 10 10  7  9  8 10 10 10
11  9  8 10 10 10  9 10  9  9 11
  9 10 10 10 10  8  6 12  9 11  9  9 10 11 11  9 13
11 12 11 11  9  9 10
 13 11  9  9 10  9 10  9  9 10  8 10 10  9 10  9  7
8 12  5 15 17  0 14
  7  8  0  4  0  2  0  2  0  0  1  9 11 14 15  0  7
4 13  2  2 17  2 16
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]

Sample 3:
Original : [ 6  8  0  7  6 17  7  0 10 17  9  2  6
15 15 16  1  0 15 11  4  4  8  8
  2 18 15 15  2  0 10 16  7  3  5  7  2 15  2 17 13
17  1  2 15  8  3  0
  3  0 13 15  7  6  2 16  0 15 11 18 13  5  5 12 18
7  1  0 14  0  4 15
 18  3  2 16 16 11 13  5  2  8  4 16 13  2  0  0  2
17  9  2  7 13 17 14
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]
NN Pred  : [ 9  9  9  9  9  9  8  7  8  6  7  6  6
8  7  7  8  7  9  9  8  8  9 10
  8  9  8  8  7  9 11  5 10 12  9  9 10  9  7  4  4
5  7  8  7  7  7  8
  6  5  8  9  8  8  8  8  9  7  6  5  8  9  9 10 12
11 15  8  2  0  3  8
 17  5 17 16  7 18  0  2 12  3  7 17 15  4  3  3  3
17  9  1  6 11 15 13
  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
0  0  0  0  0  0  0
  0  0  0  0  0  0  0  0]
```

Graphs (Training and on Test set)





(210, 211, 2)	
Test Results	Loss: 0.06228114664554596, MSE: 0.062059931457042694, Accuracy: 0.014604591764509678
Inference Time	
R2 score	
Test set predictions	Comparison of predictions and ground truth: Sample 1: Predicted: [103 106 105 106 102 99 108 109 103 108 108 116 103 104 107 105 106 99 100 115 113 104 106 102 98 101 111 103 110 107 102 104 111 102 104 108 104 106 115 111 104 99 105 109 104 104 109 98 109 115 105 112 104 109 109 103 109 108 107 95 112 108 112 103 103 108 106 100 106 110 114 105 103 105 109 114 108 109 115 105 108 108 104 106 103 103 104 96 101 107 102 97 110 104 102 101 108 110 112 104 99 106 103 102 113 108 100 99 105 115 107 97 103 107 103 109 107 113 104 101 109 99 102 106 99 105 110 110 109 106 102 105 103 99 108 110 101 107 106 109 101 117 105 102 108 104 105 97 109 103 110 103 101 112 114 103 111 105 102 104 107 101 102 110 103 115 112 113 104 103 116 111 109 108 103 103 101 110 104 102 101 90 105 105 116 96 56 54 44 128 55 180 149 30 64 138 127 7 110 163 207 180 143 192 137 14 105 131 88 148 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

```
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0]
  Ground Truth: [179 157 130 128   9  48  64 160 122
92 162 164 178  53  62  45 173 120
 177   6  83 127 188  11  73  37  94 166 148 150 171
171  20 104  91 188
 207 118 210 151 106 158   4 208 192 164  93  31 193
33  28 117 132 157
 106 172 145  77 164  10   3 112  45 123 130  52 151
97 135 207 133  84
  85 200  17 203 133  90 107 166 110   0  14 141  76
84 173 110 116  40
 113   5  19  67  39 146 103 126  73 124  68   1  94
43  52   5  42 146
 145  29 198 144 116 180 195 191 130 152 157 163  77
168 150 177 113  15
  91 203 199 157  59 104 188   5  38   4   2  73  29
79  10 130  14 171
  53 128  12  62 111  55  38 166 101  66 157 107 168
89 138 197  75 207
 117  85  21 165  11 163  49  16 159 172 164 194  24
82 100 113 101 104
  48  42  18  79  25  96  14  52  19 132  63 175 167
23  69 139 127   3
 111 170 204 179 148 196 140   1 107 133  92 150   0
0   0   0   0   0
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0]
----------------------------------------
Sample 2:
  Predicted:    [103 108 108 105  97 100 107 111  96
109 105 114 102 112 107 102 101 102
 111 107 119 103  99 100  98  95  96 107 111 110 113
98  92 113 111 109
 112 109 118 106  98 105 108 114 109 111 107 114 106
104 105 122 108 111
 107 108 112 110 111 102 108 105 109 115 103 110 109
109 109 100 117  99
 104 112 106 111 101 112 118  92 104 110 100 106 108
101  95 108  94 105
 111 112 107  91 100 103 110 101 110 115 108 111  99
103 103 106 106 120
 108 113 113 113 100 111 103  99  98 113 105  97 118
89 103  97  96 104
 102 109 111 113 109 104 105 109 107 107  98 113  94
107 108 106 106 107
 113 103 107  99  94 107 103 105 107 108 106  99 102
109 102 107 108 106
 106  94 118 117 111 115 114 100 102  99 110 107  95
109 111 117 112  94
 100 108 117 105 102 165  96  36  68  49  95  29  45
```

```
39  54  98  25  17
  22  12  73 161  83 139  69 141 169  21 167 207   0
0   0   0   0   0
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0]
  Ground Truth: [131 145 129 185 160  64  93 106 123
62 102  89  30 207 195  12 154  56
 141  51 190  79 200 127 136 166  90   6  56  54 134
210 207 116 143  46
  97 190 102  95 206  32 148 166 123 156  15 172 100
70  31 170 157 137
  14 140 116  57  85 102  22  52  33 197  44 159 180
101 203 158 171  78
  75  98 192 152   9  32 121  56 169  51 126  62 107
142 135 165  27  71
  87   1 130  24 161 163 208 179  18  92 189 179 210
29 138   8 116 100
  97 147   3  68 180 204  67 137 107  65 125 182 137
46  65 207 198 200
 110 151 200 173 135  11 129 136  70 156  95  83 150
78  32 143 136 107
 201 163 182 159 174 113 141 162 119  13   0  50  75
47 185 168 200 140
 184 153 142 119  79 137 144 103 127 108   9 174 110
9 188  34 104 135
 137 198  97 192  68 208  47  19  67  45  97  35   0
49  59 103  28  19
  28  15  79 167  87 144  72 147 173  23 169 208   0
0   0   0   0   0
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0   0   0   0   0   0   0   0   0   0
0   0   0   0   0
   0   0   0   0]
----------------------------------------
Sample 3:
  Predicted:    [106 101 101 101 109 112 102 105  98
102 104 105 105 104 108 106 112 109
  98 105  97 107 102 100 111 102 105 110  93  97 103
118 104 103  98 101
 100  99 110 104 101 100  93 100 110 106 117  98 107
108 112 105 103 106
 109  99 103 105 104 113 104 115 110  91 102 109 107
96  94  99 105 108
 107 110 113 101 109 106  97 115 106 107 105 108 102
101 112 103 112 107
 107 100 105 119  96 111 104 108 101 110 105 105 109
99  97 107 106 111
 102 105 101 116 103 103 112 103 109 109 100 107  95
111 111 108 103 103
 107 103 110  93 101 103 106  94 104 103 108 101 113
101 103 103 100  89
```

	109 103 109 96 105 104 96 120 109 100 101 114 98
	108 111 103 107 98
	 117 110 96 98 103 106 95 108 103 96 97 109 124
	98 110 99 103 102
	 107 112 106 94 92 113 119 194 124 175 194 29 47
	127 94 100 83 85
	 145 108 7 33 160 15 32 91 121 210 155 19 0
	0 0 0 0 0
	   0 0 0 0 0 0 0 0 0 0 0 0 0
	0 0 0 0 0
	   0 0 0 0 0 0 0 0 0 0 0 0 0
	0 0 0 0 0
	   0 0 0 0]
	  Ground Truth: [5 109 6 101 163 69 97 128 21
	208 41 83 31 31 5 133 199 107
	 138 156 160 128 90 199 76 164 164 105 114 92 153
	168 89 103 95 169
	  59 87 130 12 138 56 196 192 118 31 12 16 65
	148 69 181 93 142
	 142 108 110 8 75 70 87 20 136 65 70 1 55
	11 116 55 206 98
	 178 197 186 70 10 130 161 84 146 134 106 138 62
	194 183 102 170 183
	  44 127 187 160 27 102 115 56 51 3 144 34 41
	187 153 175 63 144
	  97 199 200 134 64 127 51 168 115 143 193 199 85
	121 183 26 17 62
	  79 114 153 149 185 0 173 85 26 101 171 160 82
	32 124 181 152 5
	 175 92 59 189 14 203 186 37 142 158 113 192 147
	156 74 200 143 207
	 160 182 18 88 49 33 191 102 151 112 31 120 130
	140 86 11 61 172
	  23 23 208 14 177 87 95 194 115 172 192 19 20
	139 99 107 84 82
	 146 100 1 32 164 9 31 93 124 208 157 13 0
	0 0 0 0 0
	   0 0 0 0 0 0 0 0 0 0 0 0 0
	0 0 0 0 0
	   0 0 0 0 0 0 0 0 0 0 0 0 0
	0 0 0 0 0
	   0 0 0 0]
	---------- 	

Unseen set predictions	
Unseen set 2% noise	
Unseen set 5% noise	

Graphs (Training and on Test set)