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Serial. No.	Topic.	Date.	Signature
1)	Exploring the Deep Learning Platforms & Frameworks	31/07/2025.	
2)	Implement a Classifier using an open-source dataset	7/8/2025	
3)	Study of Classifiers with respect to Statistical Parameter	7/8/2025	
4)	Build a simple feed forward network to recognize handwritten character	14/8/2025	
5)	Study of Activation Functions and its role	9/9/2025	9/9
6)	Implement gradient descent and backpropagation in deep neural network.	13/9/2025	
7)	Build a CNN model to classify Cat & dog image	13/9/2025	
8)	Experiment using LSTM	13/9/2025	
9)	Build a Recurrent Neural Network	13/9/2025.	
10)	Perform compression on MNIST	02/11/25	
11)	Experiment using VAE		
12)	Implement a DCGAN		
13)	Understand pre-trained model		
14)	Transfer Learning		
15	YOLO Model		

Completed

Exp-8 - Experiment with LSTM

13/09/25

Aim:

To experiment with an LSTM network for text sequence classification using the IMDB movie review dataset.

Objectives:

1) Understand sequence modeling with LSTM.
2) Perform sentiment analysis on IMDB dataset.
3) Evaluate model performance on test data.

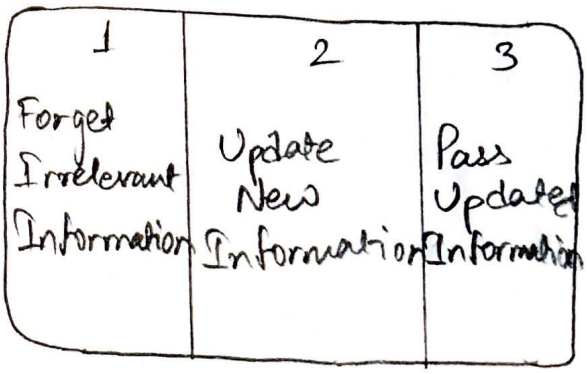
Pseudocode:

1) Load IMDB dataset with 10,000 keywords.
2) Preprocess: pad sequences to equal length.
3) Build LSTM model:
   - Embedding layer
   - LSTM layer
   - Dense output layer.
4) Train for 3 epochs on training data.
5) Evaluate on test data.

Observation:

- Training and validation accuracy improved across epochs.
- LSTM captured sequential dependencies in text better than simple models.
- Achieved ~85% test accuracy after training.

Diagram



LSTM

Result:

The experimentation with ~~LSTM~~ LSTM was successful.

Results:-

Epoch	Accuracy	Loss	Val_accuracy	Val_Loss
1/3	0.7712	0.4792	0.8339	0.3842
2/3	0.8411	0.3736	0.8485	0.3778
3/3	0.8598	0.3363	0.8409	0.3859

Final:-

Test Accuracy: 0.8409

Test Loss: 0.3859