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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	7/8/25
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	14/8/25
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.	13/11/25
10)	Perform compression on MNIST	02/11/25	
11)	Expeiment using VAE		
12)	Implement a DCGAN		
13)	Understand pre-trained model		
14)	Transfer Learning		
15	YOLO Model		

Completed

Exp-13 - Understanding the Architecture of a Pre-Trained Model

Aim:- To study and analyze the architecture, working and feature extraction mechanism of a pre-trained deep learning model using transfer learning.

Objective:- 1) To load a pre-trained CNN model from a standard library such as torchvision. models.

2) To visualize and different layers.

3) To interpret how pre-trained models extract hierarchical features from images.

4) To eaplore how much models can be fine-tuned for custom classification tasks.

Observation:
- The pre-trained model contains multiple convolutional and pooling layers stacked sequentially to learn spatial hiearchies of features.
- Early layers capture low-level details, while deeper layers

capture high-level semantic information.

- Transfer learning enables faster convergence and better accuracy even with limited data, as the model already possesses generalized visual knowledge

Algorithm: 1) Import libraries.

2) Load pre-trained model
resnet 18 = models. resnet18(pretrained= True)

3) set Evaluation mode
Call resnet18.eval()

4) Display model architecture.
Print the model using print(resnet18)

5) Understand Layers

6) Visualize the model Parameters

7) Test with sample input

Result: The result was obtained successfully.

& Predicted Label: Golden Retriever
which also was the input image.