

LAB 13 :- Understanding the Architecture of a pretrained Model.

AIM :- To understand and analyze the architecture of a pre-trained deep learning model.

Pseudo code :-

- Import required libraries
- Load a pre-trained model from pytorch
- Display the full architecture of the model.
- Count total trainable or non-trainable parameters.
- Visualize layer types (conv, pooling).
- Optionally, pass a sample image through the model to verify dimensions.
- Analyze layer-by-layer flow and parameter size.

Observation:-

- The VGG16 model consists of 13 convolutional layers, 3 fully connected layers, and uses RELU after each convolution.
- The model ends with a softmax classifier.
- The feature extracted part includes multiple conv max pool blocks, which

progressively reduce spatial dimensions.

- Total parameters are around 138 million.
- pre-trained weights help in transfer learning

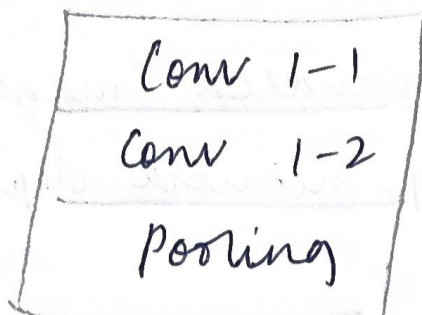
Result:

- The architecture and structure of the pretrained model were successfully analyzed.

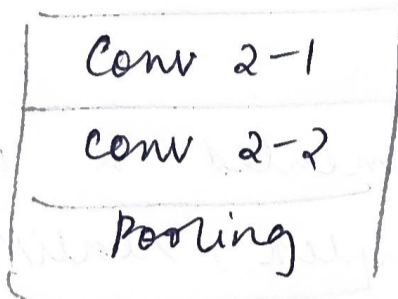
Exd

Vgg 10 Architecture Diagram

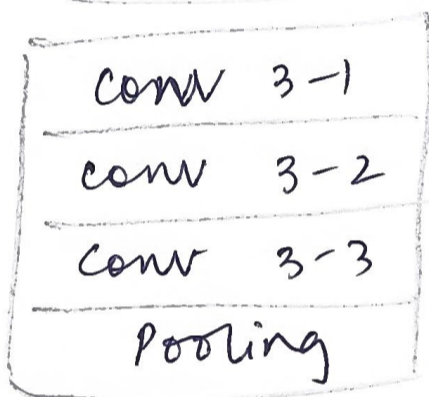
Input →



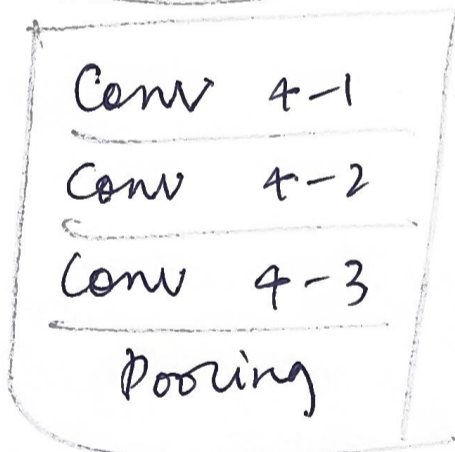
3x3 filters
64 channels



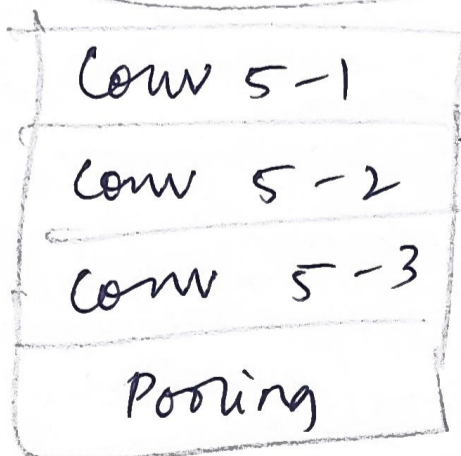
3x3 filter
128 channels



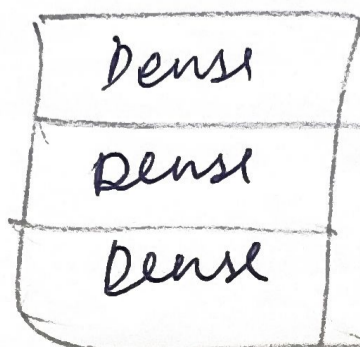
3x3 filters
256 channels



3x3 filters
512 channels



3x3 filters
512 channels



Customizable
dense layers
output

output

Top Accuracy

Top Accuracy

VGG16

79.0%

94.5%

Training

Validation

Testing

86.62%

91.95%

29.97%

Parameter

22.97%