



1. fullyConnectedLayer

Purpose: FC layers are used to connect every neuron in the previous layer to every neuron in the next layer. They are used to combine the features learned by convolutional and pooling layers to predict the output class and perform classification.

Output size: Since the target labels must be adjusted to fit the number of classes, changing 10 to 3 reduces the number of classes the network can predict from 10 to 3. It can tailor the network to the specific classification at hand.

Input: Flattened feature map from pool5

Output: 1D vector where each element represents a score for a particular class.

2. softmaxLayer

Purpose: The softmax layer is used to convert the raw class scores from the fully connected layer into probabilities that sum to 1. It helps in interpreting the output scores as probabilities for each class.

Input: Class scores

Output: Probability distribution over the classes

3. classificationLayer

Purpose: The classification layer is used during training to compute the loss between the predicted probabilities and the true labels. During inference, it can output the predicted class labels.

Input: Probabilities and true labels during training.

Output: Scalar loss value during training and predicted class labels during inference.