

Image Classification with Fine-tuning of Pre-trained Models

Brage Wiseth

March 12, 2024

The model used was a pre-trained ResNet18 model, which was fine-tuned on the ImageNet dataset using the PyTorch library. The model was fine-tuned with a linear head on top of the pre-trained model, and the learning rate was set to 0.001. The optimal learning rate and optimizer of those used were found to be the Adam optimizer with a learning rate of 0.001. The model was trained for 10 epochs, and the learning rate was decayed by a factor of 0.1 after 5 epochs. The model was trained on a dataset

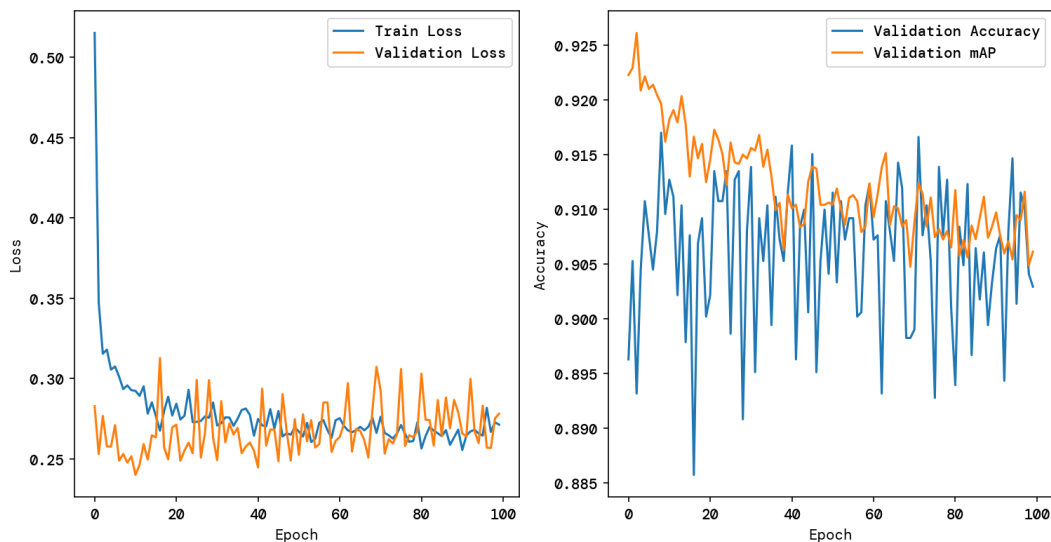


Figure 1: Example image

Reported percentage of non-zero activations in the feature maps across 200 images [0.8, 0.7, 0.6, 0.5, 0.4]

Original image



Figure 2: Example image

Feature maps from the first 3 layers

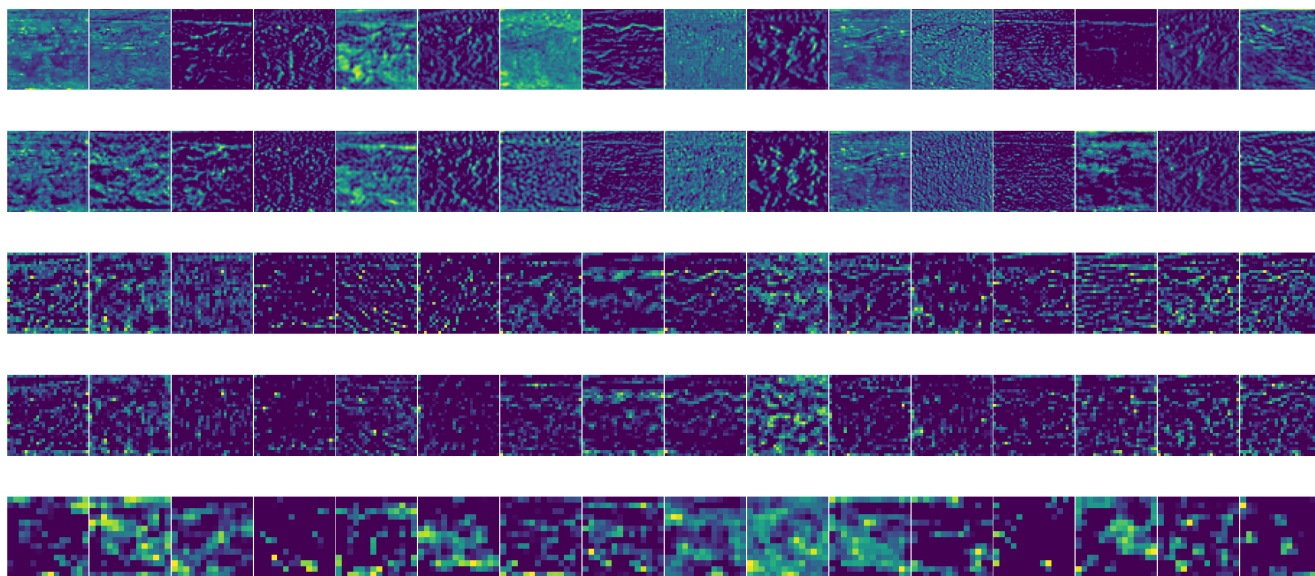


Figure 3: Example image