

Experiment No: 8.

Aim: claxifying data using pretrained models!

Transfer learning. Training various popular

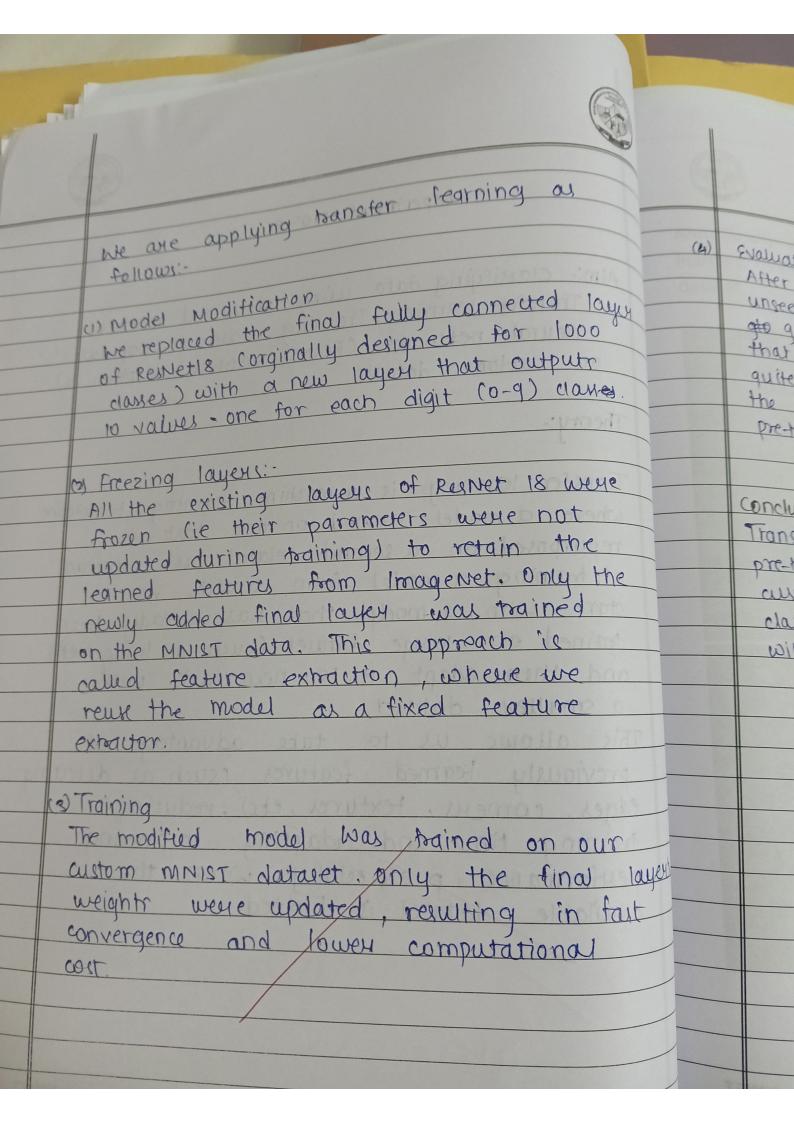
neural networks (Resnet, Varnet, Inception V3)

on custom dataset.

Theory:

Transfer learning is a machine learning technique where a model trained on one task is repurposed on a second related task. Instead of training a model from scratch, we start with a model that has already been trained on large dataset (such as Imagenet) and then adapt it to new task with a smaller dataset.

This allows us to take advantage of previously learned features usuch as deterting edges, corners, textures, etcl, reducing training time and adapting improving performance, perpecially when the available dataset is limited.





(4) Evaluation.

After training, the model was tested on unseen MNIST images. The model achieved achieved that even though mnist digits are quite different from imagenet images, the lower-level features learned by the pre-trained model are still useful.

Conclusion:

Transfer learning allows un to effectively use pre-todined deep learning models for custom tasks. In this practical we successfully classified handwritten digits using Respect 18 with only the final layer trained.