Assignment-5

Pre-training is nothing but instead of starting the learning process from scratch, you start from patterns that have been learned when solving a different problem. It is a model which is already trained on some other data set with different number of classes. It is also called as Transfer Learning. Due to the computational cost of training such models it is common practice to import and use models from published literature.

Example: The knowledge gained while learning to classify Wikipidea texts can be used to tackle legal text classification problems.

Transfer learning:

Development of open source pre trained model:

A pretrained model is created and trained by someone else to solve the problem that is similar to ours.

Repurposing the model:

After getting our hands on these pre-trained models, we repurpose the learned knowledge, which includes the layers, features, weights, and biases. There are several ways to load a pre-trained model into our environment.  In the end, it is just a file/folder which contains the relevant information. However, deep learning libraries already host many of these pre-trained models, which makes them more accessible and convenient:

TensorFlow Hub

Keras Applications

Pytorch Hub

Fine Tuning the problem:

Well, while the current model may work for our problem. It is often better to fine-tune the pre-trained model for two reasons:

* So that we can achieve even higher accuracy.
* Our fine-tuned model can generate the output in the correct format.