Team : Constellation

Report EarthAI Hackathon

We used the structure of a modified pre-trained CNN and we readapted the model for the specific requirements of the challenge using the satellite imagery training dataset. In the case of this challenge, we are using **ResNet 101** which was originally trained on the natural color training dataset (ImageNet).

Our solution is based on importing the pretrained deep neural network and using transfer learning in our favor to get the best of it. After testing various pretrained models we've found that ResNet101 gives the best results.
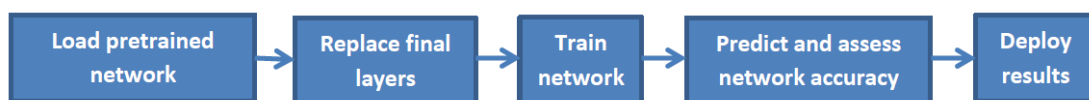

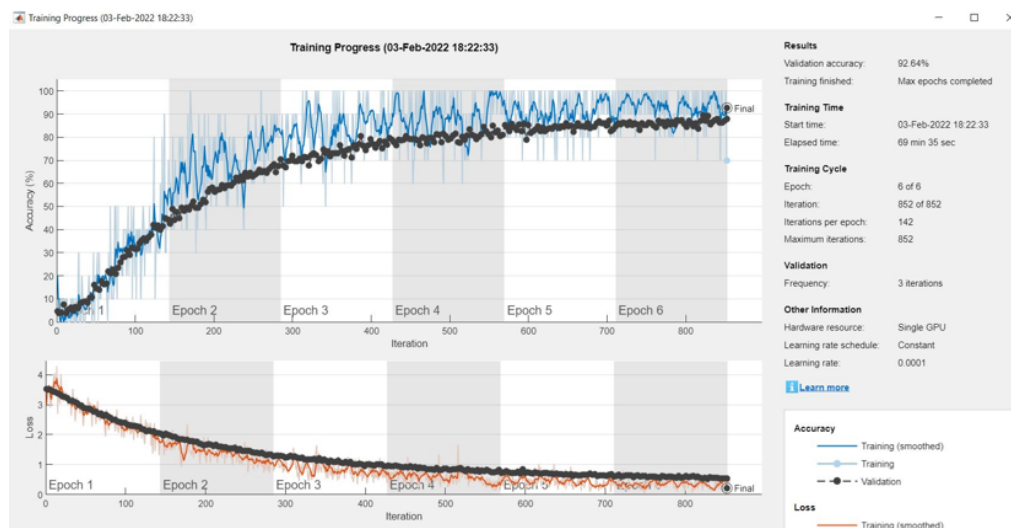**Fig. 1** – Fine-tuning workflow abstraction

Fig. 2 – Training progress of ResNet101 in our data

PS : We used the classes of images as labels so YPredict will contain categorical values (Agricultural, Airplane...)

Contact corresponding : oussama.zaibi@supcom.tn