Semi-supervised Domain Adaptation via adversarial training
## *Antonin Couturier, David Almasan*

Research Question

How to mitigate the degradation of a classifier's performance when going from academic (source) to real-world (target) datasets when the cost of labelling is really high?

Method, Data & Results

-Adversarial training alternates unsupervised (class agnostic domain discriminators at various levels using target dataset) and supervised (on source dataset) learning using same ResNet50.

-Datasets – Cifar10 (source) & STL10 (target)
-Baseline – supervised learning on source
-Upper-bound – supervised learning on target
-Consistent increase in accuracy at various levels of supervised learning
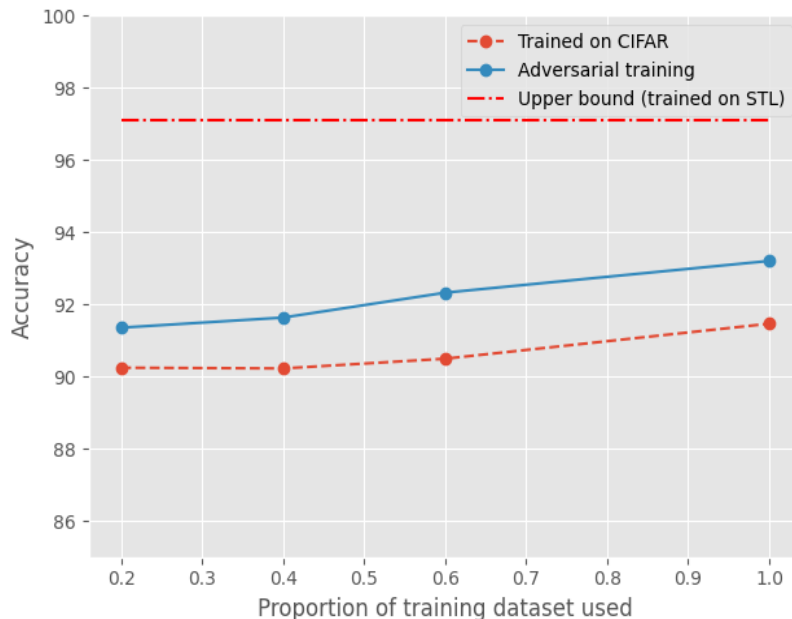
References

Rasmus, al., NIPS, 2015.
Ganin & Lempitsky, ICML, 2015.
Zhenwei & Zhang, ICCV, 2019.
Zheng, al. CVPR, 2020.

THALES