Transfer learning can outperform SSL

Training on 32x32 ImageNet then fine-tuning on CIFAR-10 with 4k labels outperforms all of our SSL models.

Models are tuned on unrealistically large validation sets

Commonly, SSL researchers tune hyperparameters on a validation set larger than the labeled training set.

With a realistically sized validation set, error bars on accuracy are larger than differences, hence good model selection may be infeasible.

Code available!

https://github.com/brain-research/realistic-ssl-evaluation