

TTIC 31230, Fundamentals of Deep Learning

David McAllester, Winter 2020

Self-Supervised Pretraining in Vision

Learning Representations for Colorization

Larsson et al., 2016

$$x \qquad y_{\Phi}(x) \qquad y$$

Trained to minimize L_2 image distortion between $y_{\Phi}(x)$ and y .

Self-Supervised Pretraining in Vision

Feature Learning by Inpainting, Pathak et al., 2016

Trained to minimize distortion between $y_{\Phi}(x)$ and y and to **maximize** discriminator loss for distinguishing $y_{\Phi}(x)$ from y .

Evaluation

Self-supervised representations (features) are tested by training a **linear** classifier for ImageNet.

Results are given in the slides on contrastive predictive coding (CPC).

END