Unsupervised domain transfer for classification

$$\frac{\partial L_y}{\partial \theta_f}$$

$$\frac{\partial L_y}{\partial \theta_y}$$

loss L_y

features **f**

class label y

label predictor $G_y(\cdot; \theta_y)$

$$-\lambda \frac{\partial L_d}{\partial \theta_f}$$

input x

feature extractor $G_f(\cdot; \theta_f)$

$$\frac{\partial L_y}{\partial \theta_f}$$

forwardprop   backprop (and produced derivatives)
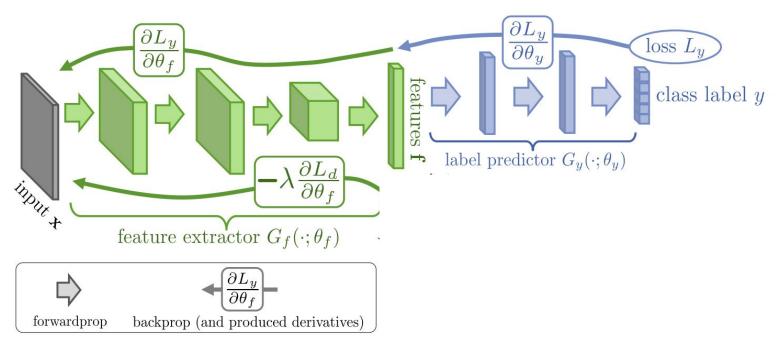
1. *Ganin et al.* "Domain-Adversarial Training of Neural Networks", JMLR 2016

Trends: Domain Adaptation / Unsupervised Alignment