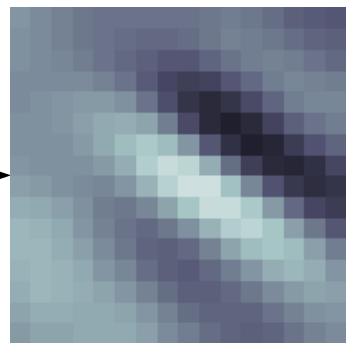
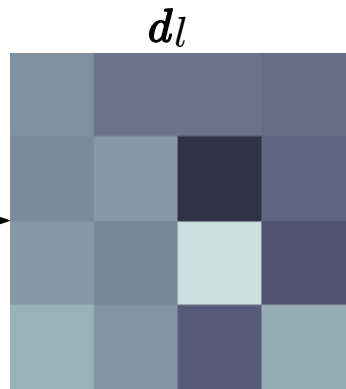


Learning phase

Training data
 $\{X_l, X_h\}$

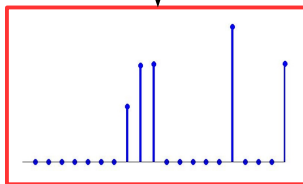
$$(D_h, D_l) = \min \frac{1}{2} \|X_h - D_h A\|_2^2 + \frac{1}{2} \|X_l - D_l A\|_2^2 + \lambda_1 \|A\|_1$$



d_h

Reconstruction phase

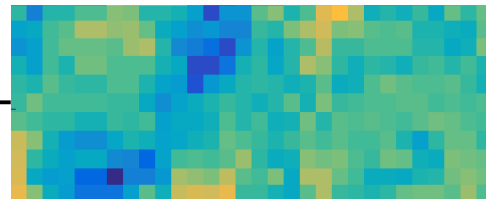
$$a = \min \frac{1}{2} \|x_l - D_l a\|_2^2 + \lambda_2 \|a\|_1$$



a

$$x_h = D_h a$$

x_l



x_h

