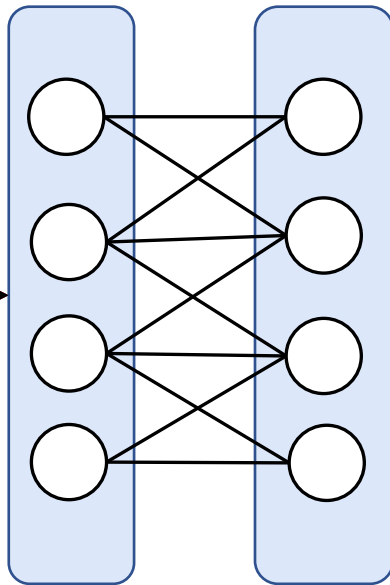


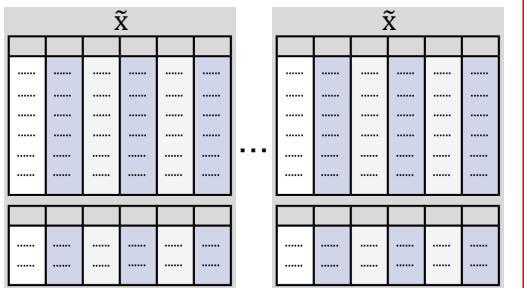
Labeled Dataset



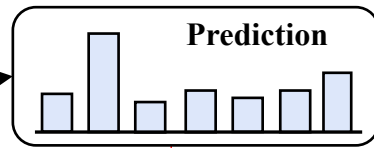
Encoder
 $\phi(x)$



Unlabeled Dataset



Prediction Module



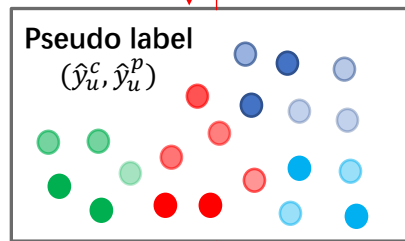
Cross-Entropy
Loss (x_l, y_l)

Cross-Entropy
Loss (x_u, \hat{y}_u^c)

Label distribution
 $p(y|x)$

Pseudo labels
with Eq.(7)

Pseudo-Label
Generation



Learned data
representation z

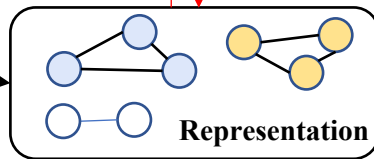
Contrastive pairs
with Eq.(4)

Contrastive
Loss (x_u, \hat{y}_u^p)

Contrastive
Loss (x_l, y_l)

$\phi \circ h_p$

$\phi \circ h_c$



Contrastive Module