$$X_{ref} \qquad \begin{bmatrix} X_{dat} \\ \bar{X}_{align}^{align} \end{bmatrix} \qquad \begin{bmatrix} X_{align}^{align} \\ \bar{X}_{ref}^{align} \end{bmatrix}$$

$$A \text{lign } X_{ref} \qquad A \text{lign } X_{dat} \qquad C \text{classify } X_{dat}$$

$$X_{ref}^{align} = X_{ref}^{align} \qquad X_{dat}^{align} \qquad \hat{Y}$$

$$\mathcal{L}_{class} = C_{class} \qquad \hat{Y} \qquad \hat{Y} \qquad \hat{Y}$$

$$\mathcal{L}_{class} = C_{class} \qquad \hat{Y} \qquad \hat{Y}$$