$X^{M \times N} \longrightarrow$ scFEA $\longrightarrow Y^{M \times n} \dashrightarrow$ MPO $\longrightarrow Y'^{M \times n}$

Labels

SNN $\longrightarrow Y''^{M \times n}$

Repeat until the Stop Condition

Algorithm 1.

Input: $X^{M \times N}, FactorGraph, n_{stop}, \sigma$
Output: $Y''^{M \times n}$

Step 1:
 $Y^{M \times n} \leftarrow scFEA(X^{M \times N}, FactorGraph)$
Step 2:
$current\_step \leftarrow 0$
$loss \leftarrow inf$
$while\ current\_epoch < n_{stop}\ or\ loss > \sigma$:
  $Y'^{M \times n} \leftarrow MPO(Y^{M \times n})$
  $Y''^{M \times n} \leftarrow SNN(X^{M \times N}, FactorGraph, Y'^{M \times n})$
  $current\_epoch \leftarrow current\_step + 1$
  $loss \leftarrow ImbalanceLoss(FactorGraph, Y''^{M \times n})$
End