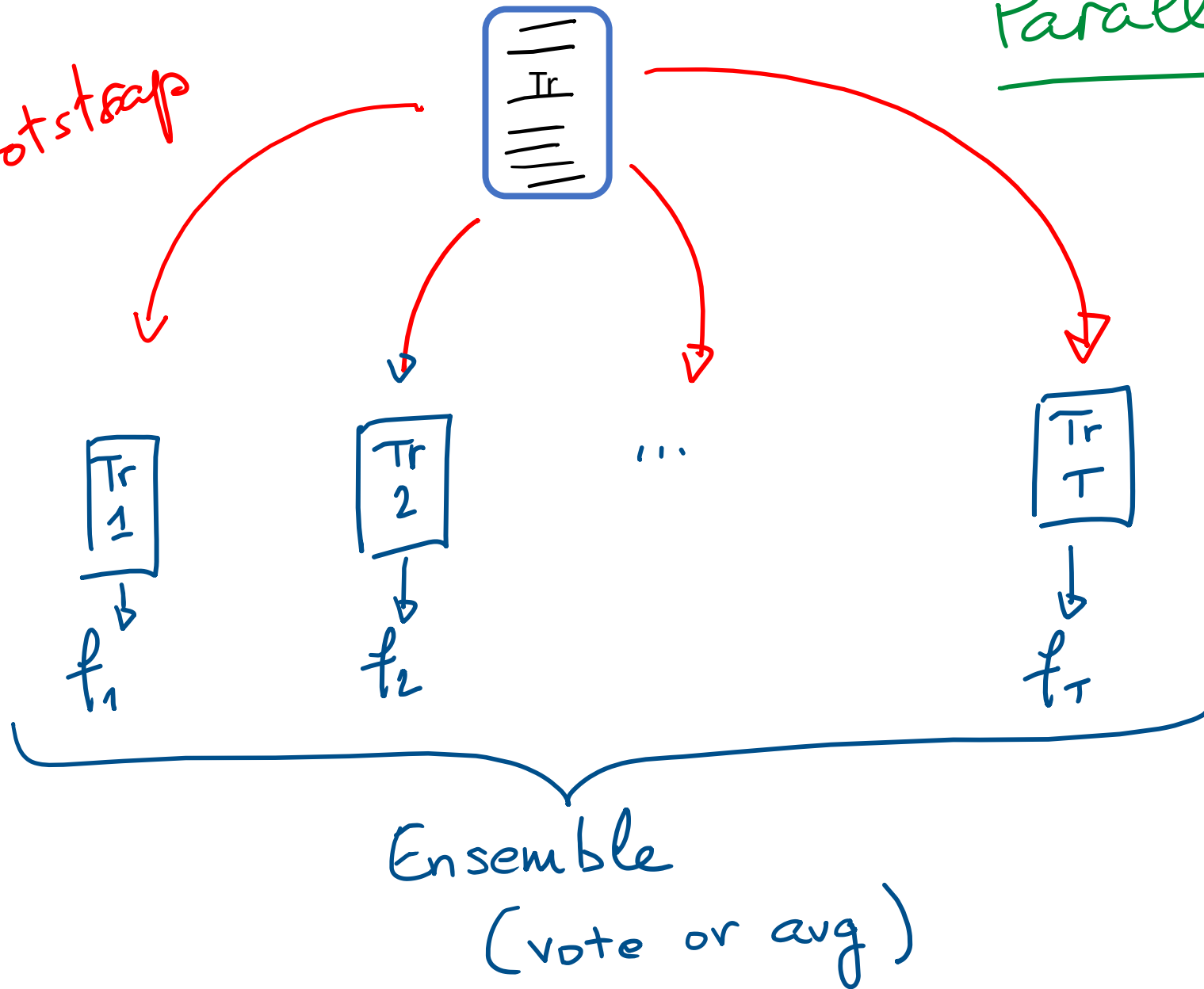


Bagging

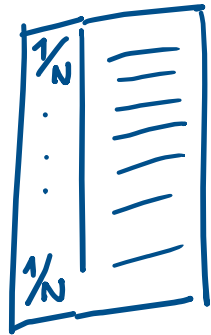
Bootstrap

Parallel



# Boosting

step 1

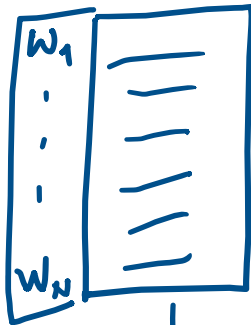


$\downarrow$   
 $f_1$

$\downarrow$   
 $\alpha_1$

$\downarrow$   
 $F_1 = \alpha_1 f_1$

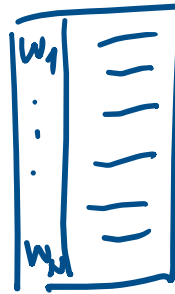
step 2



$\downarrow$   
 $f_2$

$\downarrow$   
 $\alpha_2$

$\downarrow$   
 $F_2 = F_1 + \alpha_2 f_2$



$\dots$

$\dots$

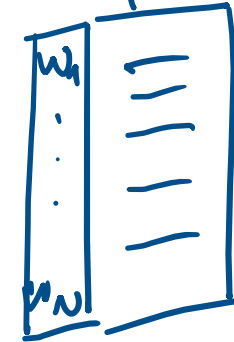
update  
the  
weights \*

\*

\*give more weights to instances  
misclassified by  $F_{k-1}$

# Sequential

step T



$\downarrow$   
 $f_T$

$\downarrow$   
 $\alpha_T$

$\downarrow$   
 $F_T = F_{T-1} + \alpha_T f_T$

final model