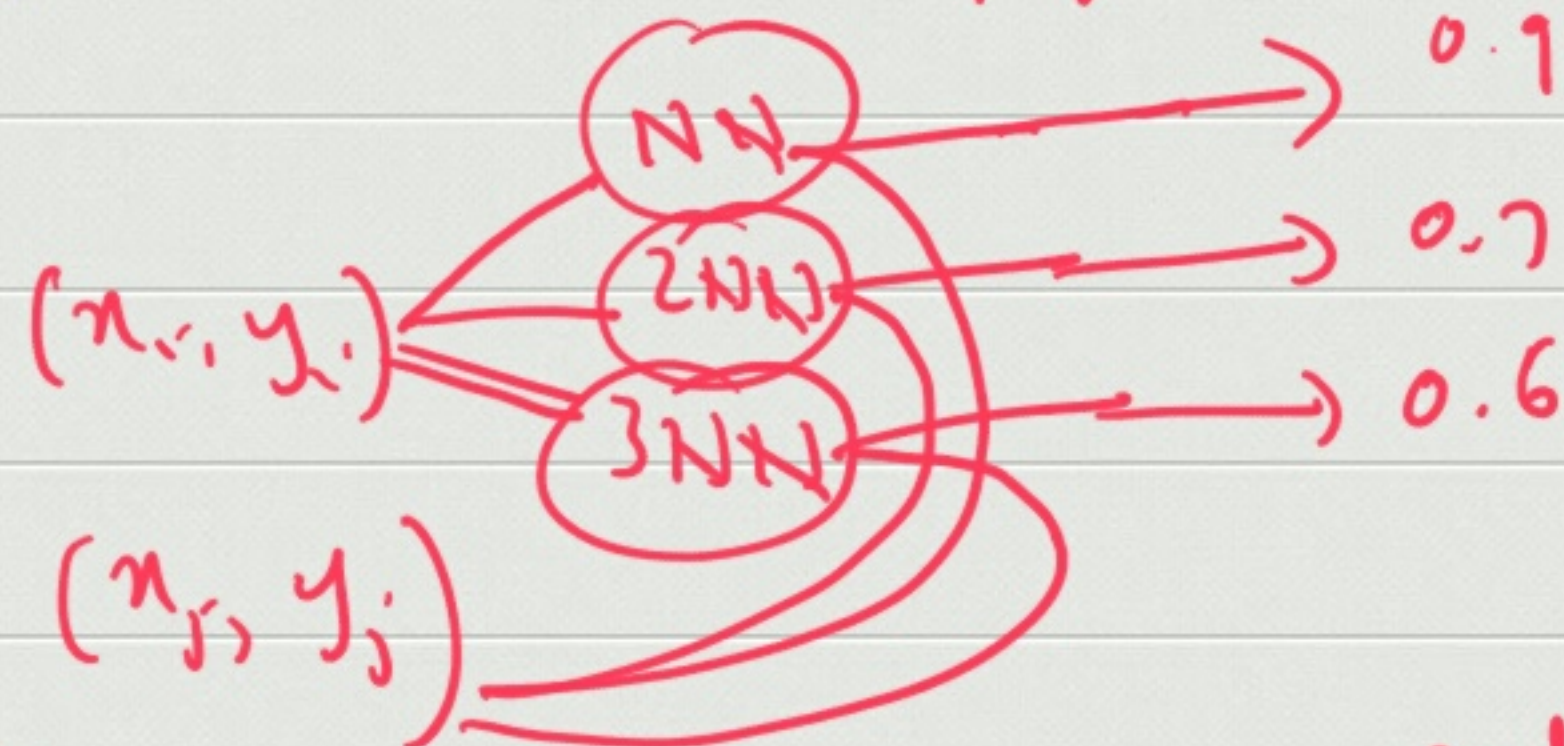


# MODEL SELECTION

1-NN, 2-NN, ..., k-NN. (consider these different models)  
Perf. measure

→ Validation: (i) Training Set  
→ (ii) Validation Set

independent of  $D$



$m' \rightarrow \infty$   
fraction correctly class.  $\rightarrow$  Prob. of val. correctly.

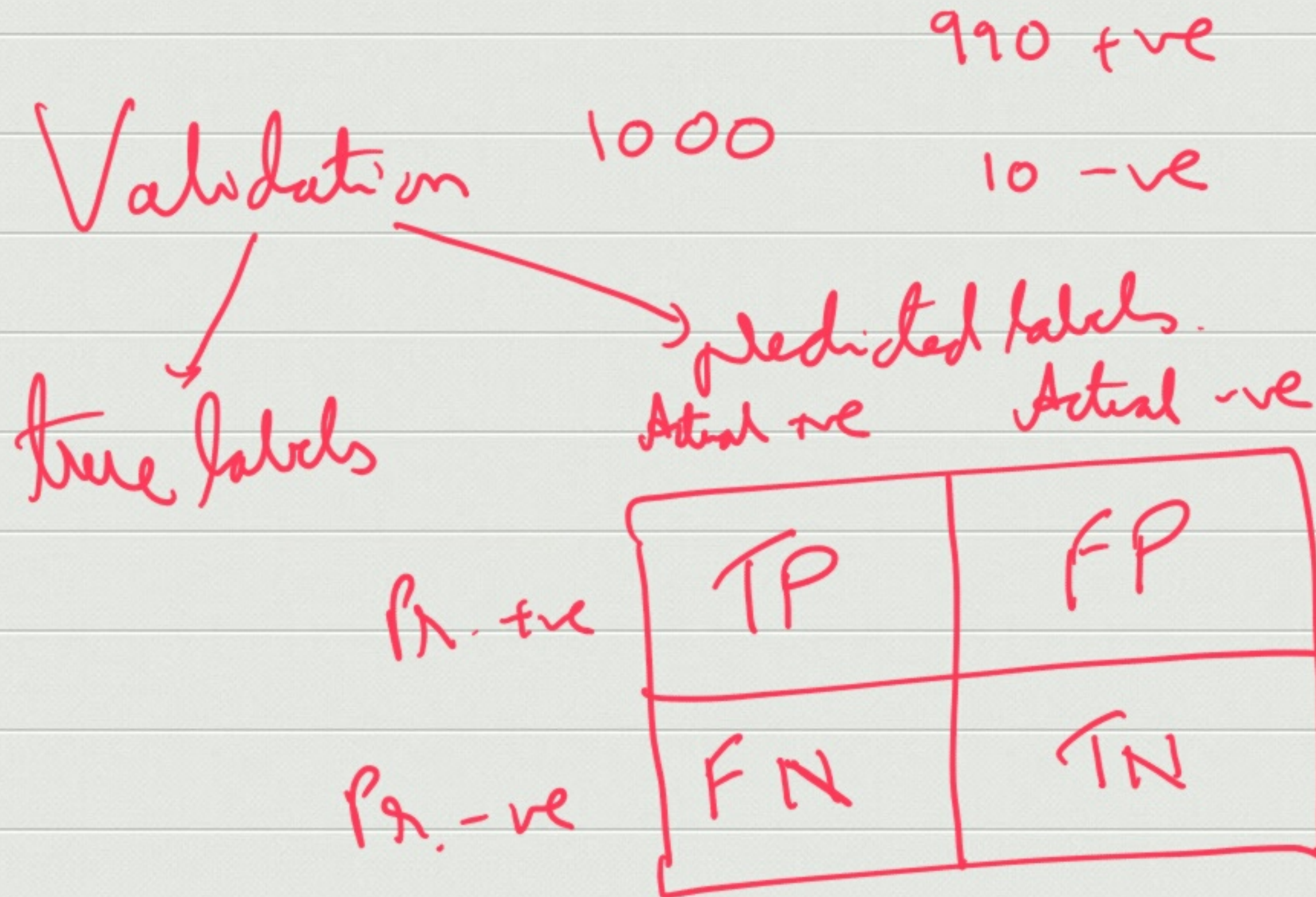
Sweet Point for max. training and Validation  
set size is LEAVE-ONE-OUT-ERROR.

(unbiased estimate for  $m-1$  eq. based classifiers).



# PERFORMANCE MEASURES

(for binary classification)



$$\text{TPR} \rightarrow \frac{TP}{TP+FP}$$

$$\text{FNR} \rightarrow \frac{TN}{TN+FN}$$

→ All means of P

$$\text{Precision} \rightarrow \text{TPR}$$

$$\text{Recall} \rightarrow \frac{TP}{TP+FN}$$