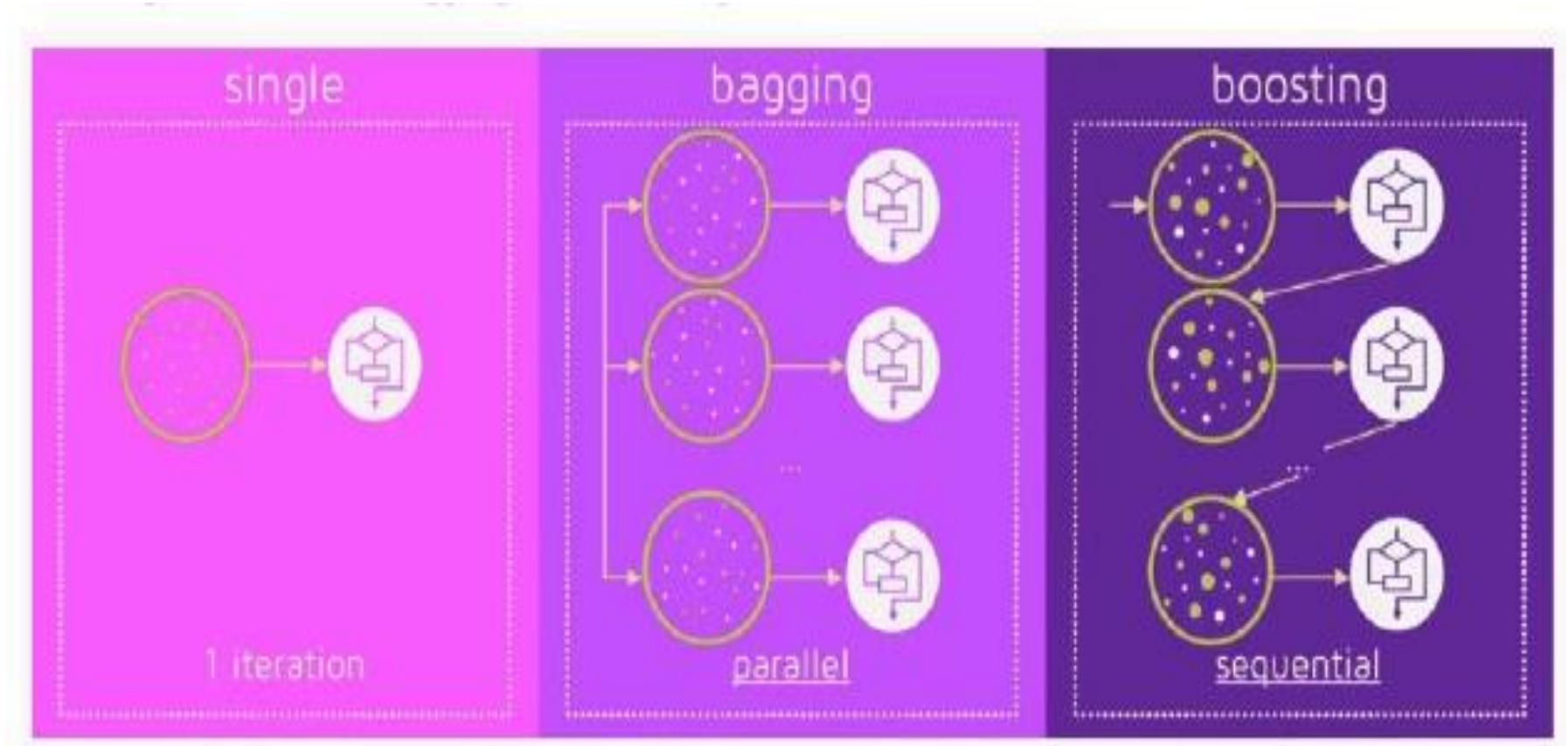


Adaboost

Adaboost

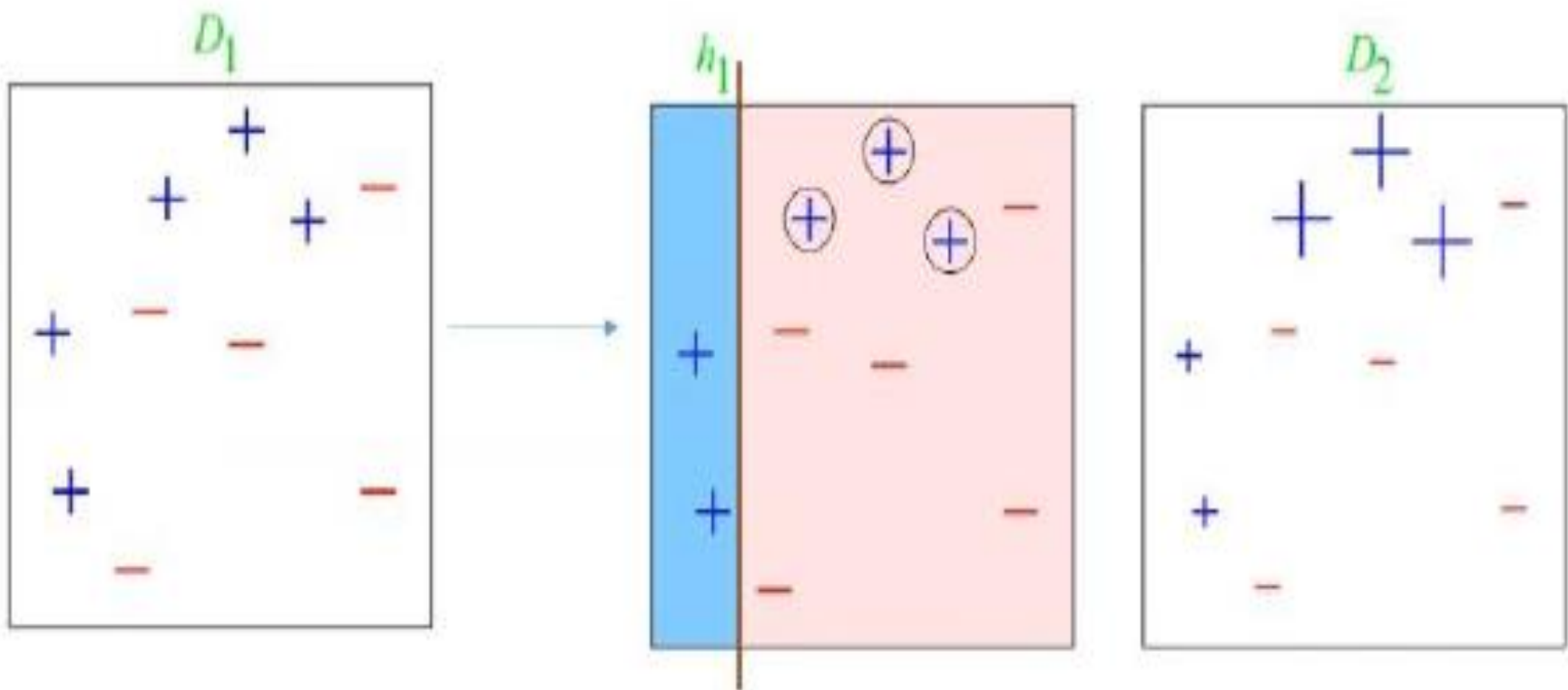
- Single model vs Bagging vs Boosting



Adaboost

□ Example 1

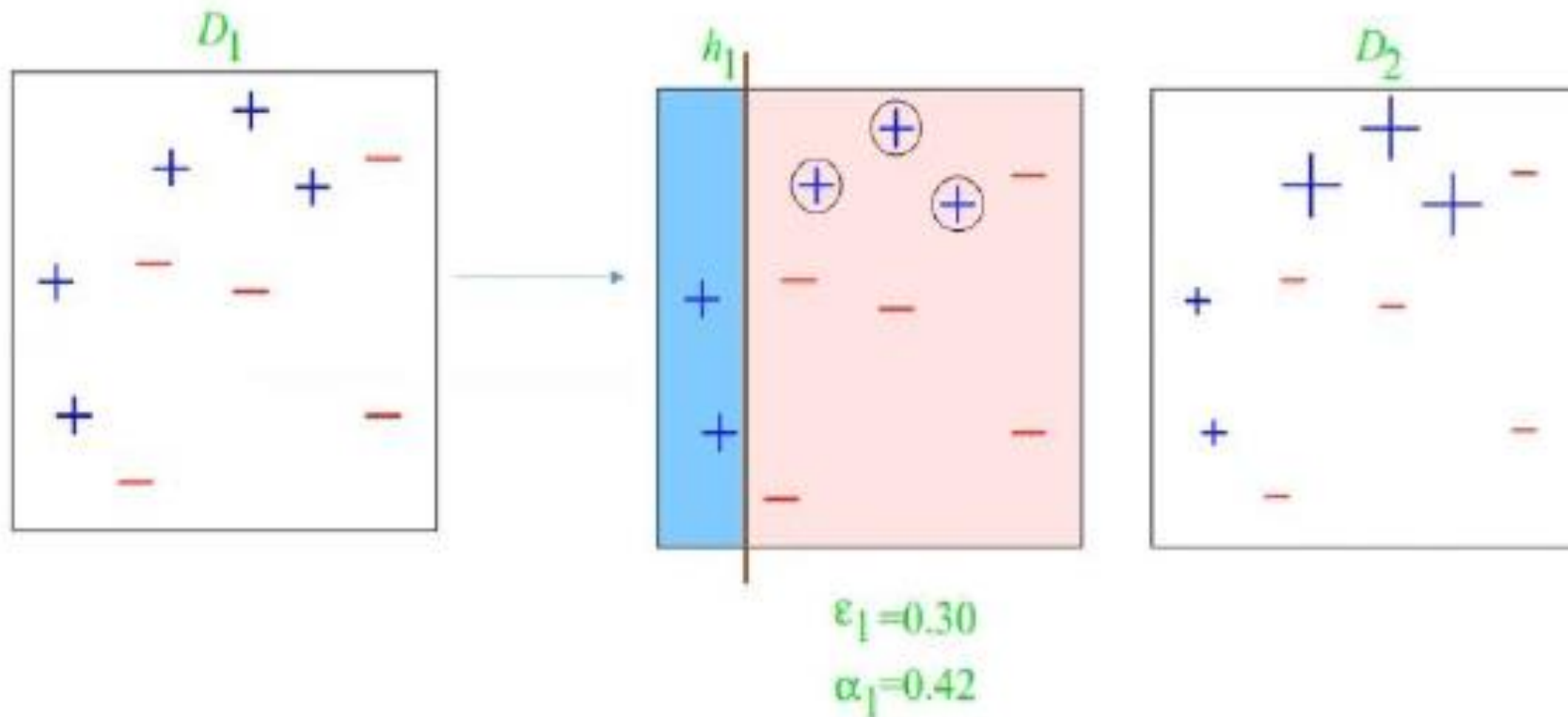
✓ Round 1



Adaboost

□ Example 1

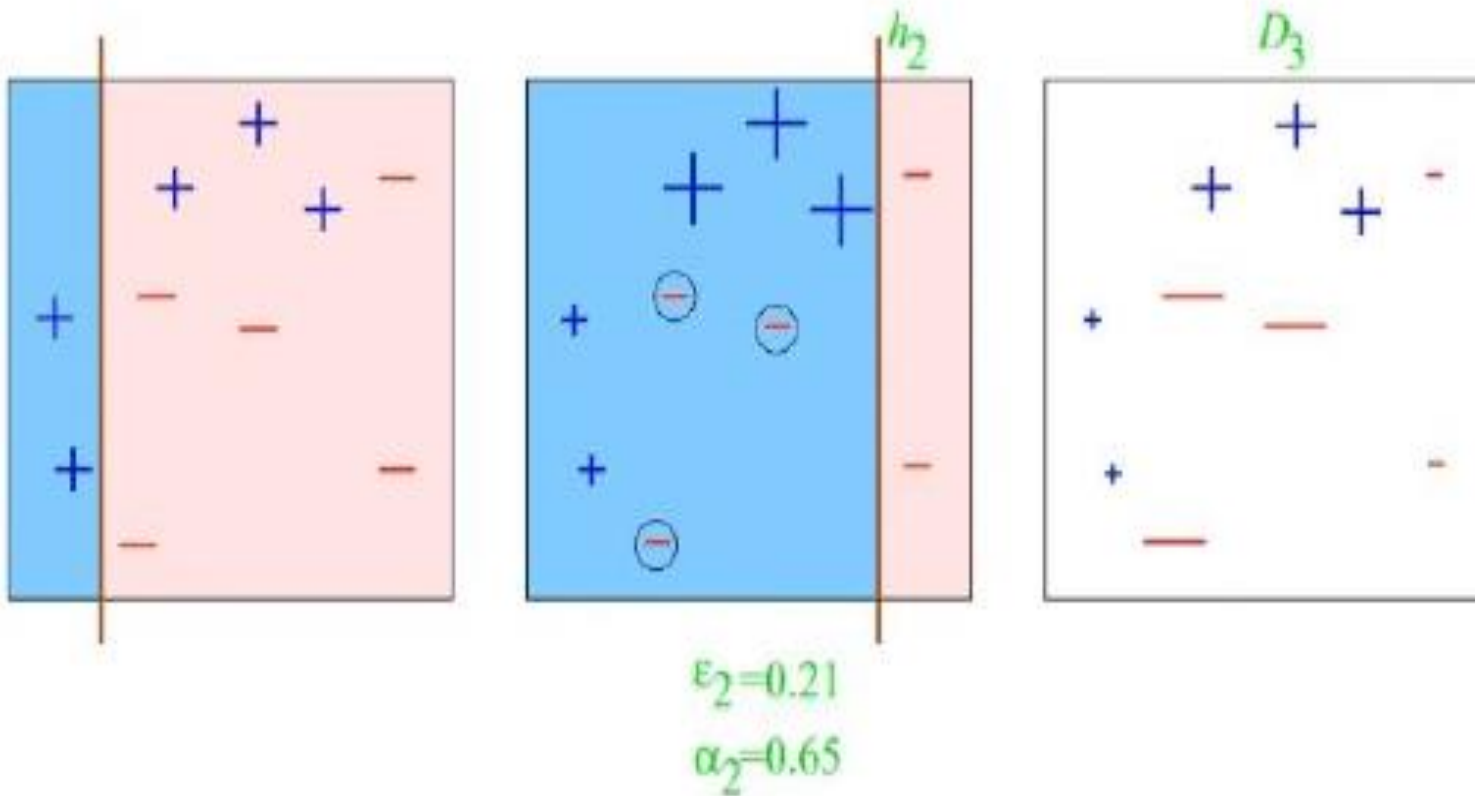
✓ Round 1



Adaboost

□ Example 1

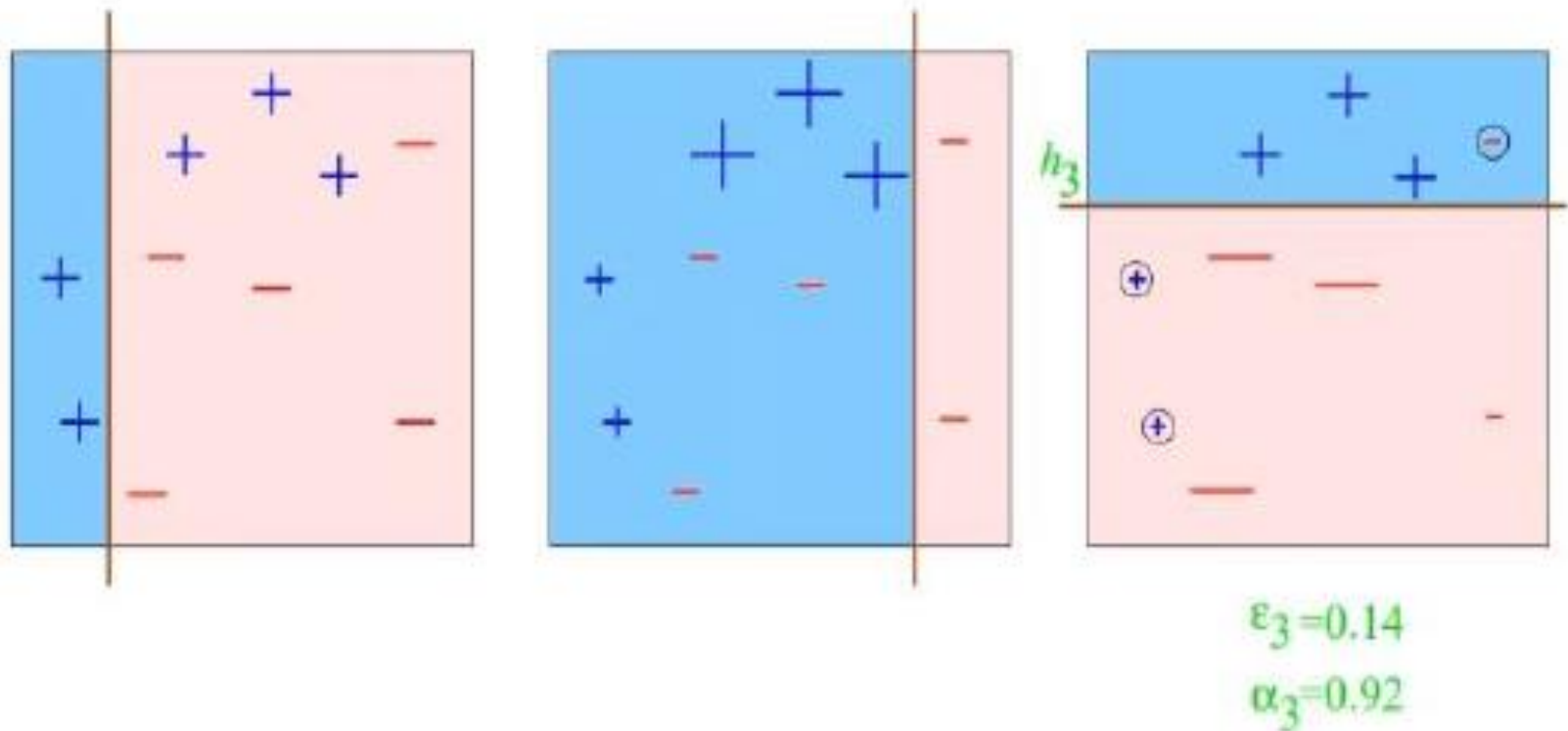
✓ Round 2



Adaboost

□ Example 1

✓ Round 3



Adaboost

□ Example 1

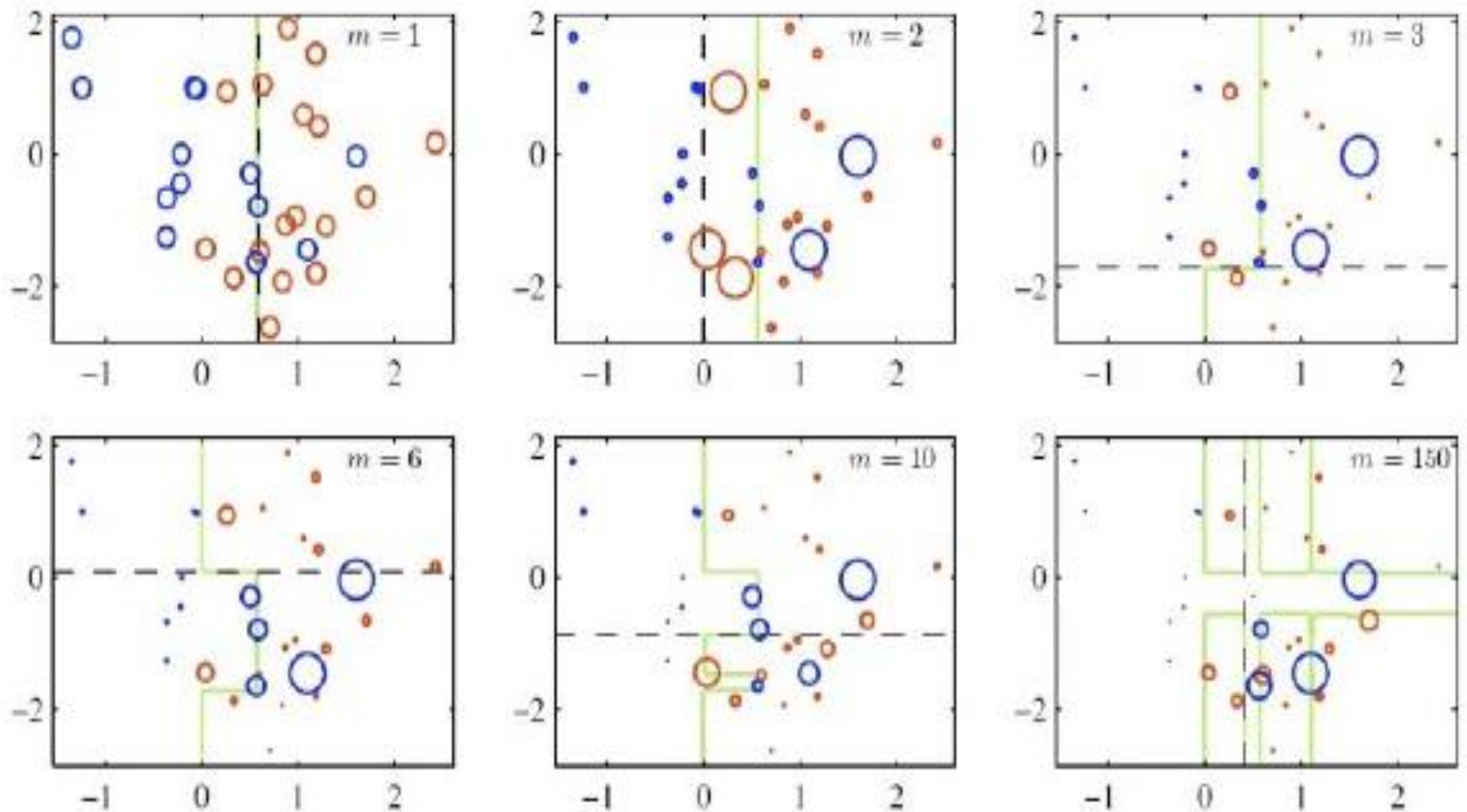
✓ Final classifier

$$H_{\text{final}} = \text{sign} \left(0.42 \begin{array}{|c|} \hline \text{blue} \\ \hline \end{array} + 0.65 \begin{array}{|c|} \hline \text{blue} \\ \hline \end{array} + 0.92 \begin{array}{|c|} \hline \text{blue} \\ \hline \end{array} \right)$$

=

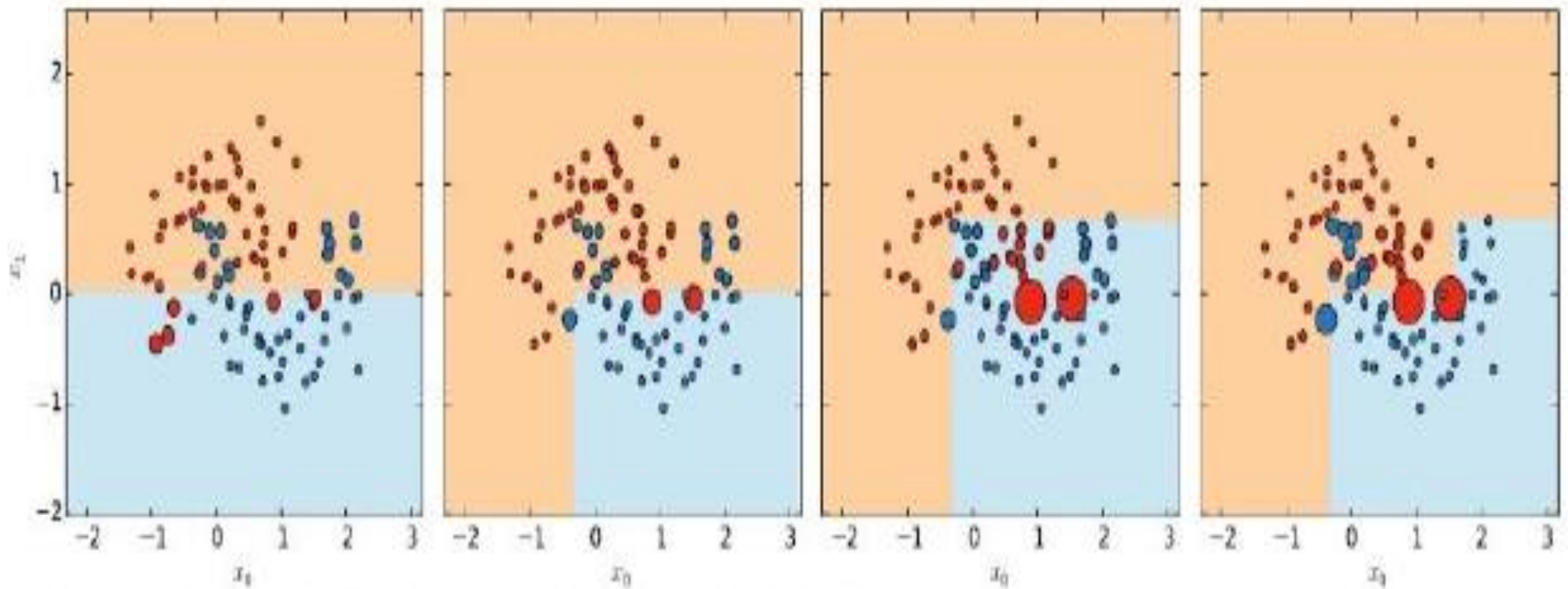
Adaboost

□ Example 2



Adaboost

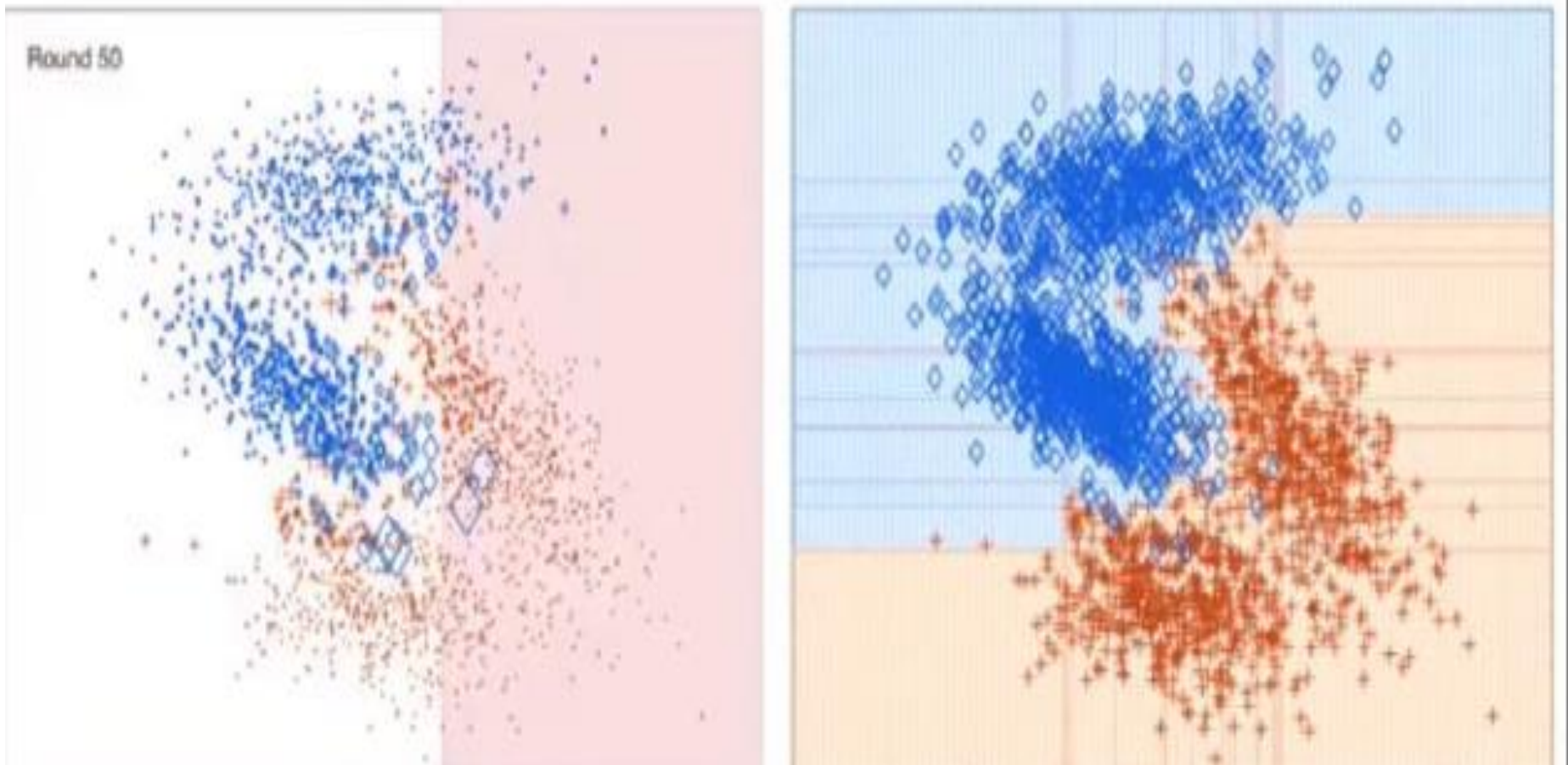
□ Example 3



https://www.slideshare.net/DataRobot/gradient-boosted-regression-trees-in-sckitlearn?from_action=save

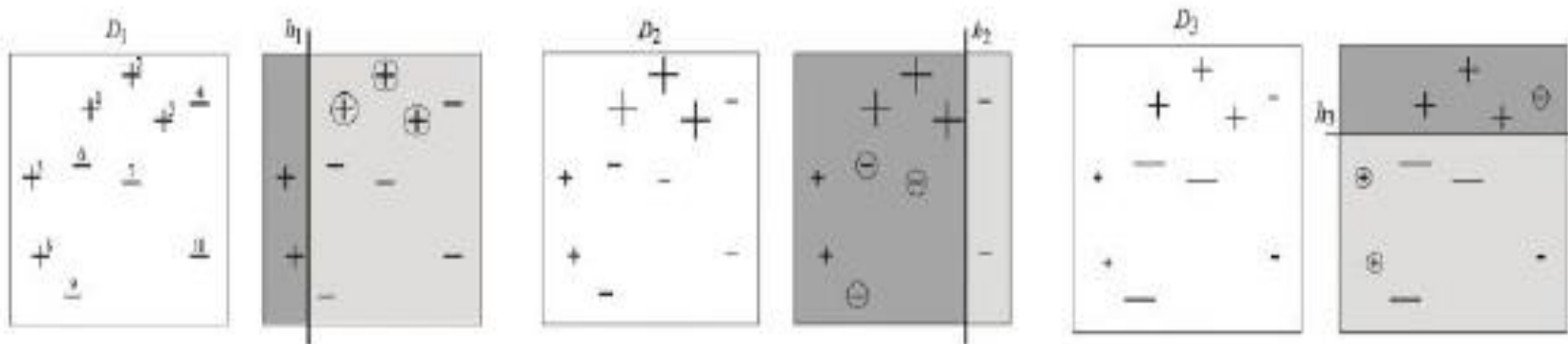
Adaboost

□ Example 4



Adaboost

□ Example 5



$$H(x') = \text{sign} \left(\sum_{t=1}^T \alpha_t h_t(x') \right)$$

$$= \text{sign} \left(0.42 \left(\begin{array}{|c|} \hline \text{shaded} \\ \hline \end{array} \right) + 0.65 \left(\begin{array}{|c|} \hline \text{shaded} \\ \hline \end{array} \right) + 0.92 \left(\begin{array}{|c|} \hline \text{shaded} \\ \hline \end{array} \right) \right)$$