## Boosting with ADABOOST

Discovered by Freund and Schapire in 1996.

* We fit our **first** learner in order to maximize accuracy, or equivalently, minimize the number of errors. There are a few good ones, but one can check that we can do no better than three errors.
* The **second** learner needs to fix the mistakes that the first one has made. We take the misclassified points and make them bigger. In other words, we'll punish the model more if it misses these points. So, the next weak learner needs to focus on these more.
* Now again, we punish the points that are misclassified by the second learner by enlarging those points.
* Our **third** weak learner tries really hard to correctly classify the big points. We could keep going, but let's say three is enough.

Now, we want to combine the three models we found. I'll be more specific about combining them later, but for now, let's imagine that we're making them vote like before.

This is a bit vague on the details, but we will dive deeper in the next few videos.

So, What are the steps of the AdaBoost algorithm?

1. Maximize accuracy, minimize errors
2. Identify misclassified points from the previous step
3. Try to classify points identified in the previous step