Boosting Classifiers

[Freund & Schapire, ICML 1996]

Boosting:

- Learn a sequence of classifiers from a single training set
- But reweighting examples to emphasize misclassified
- Final classifier = weighted combination of classifiers

Summary:

- Empirically shown to be effective
- Theory still under development
- Many variants of boosting, active research

Boosting - Further Reading

- Freund, Y. and Schapire, R., “Experiments with a new boosting algorithm,” *Proceedings of the 13th International Conference on Machine Learning*, Morgan Kaufmann, pp. 148–156.
- Friedman, J., Hastie, T., and Tibshirani, R., “Additive logistic regression: a statistical view of boosting,” unpublished. Available at ftp://stat.stanford.edu/pub/friedman/boost.ps.Z