

Boosting

- **boosting** = general method of converting rough rules of thumb into highly accurate prediction rule
- **technically:**
 - **assume** given “**weak**” **learning algorithm** that can consistently find classifiers (“rules of thumb”) at least slightly better than random, say, accuracy $\geq 55\%$ (in two-class setting) [“**weak learning assumption**”]
 - given sufficient data, a **boosting algorithm** can **provably** construct single classifier with very high accuracy, say, 99%