Introduction to Machine Learning

Brown University CSCI 1950-F, Spring 2011
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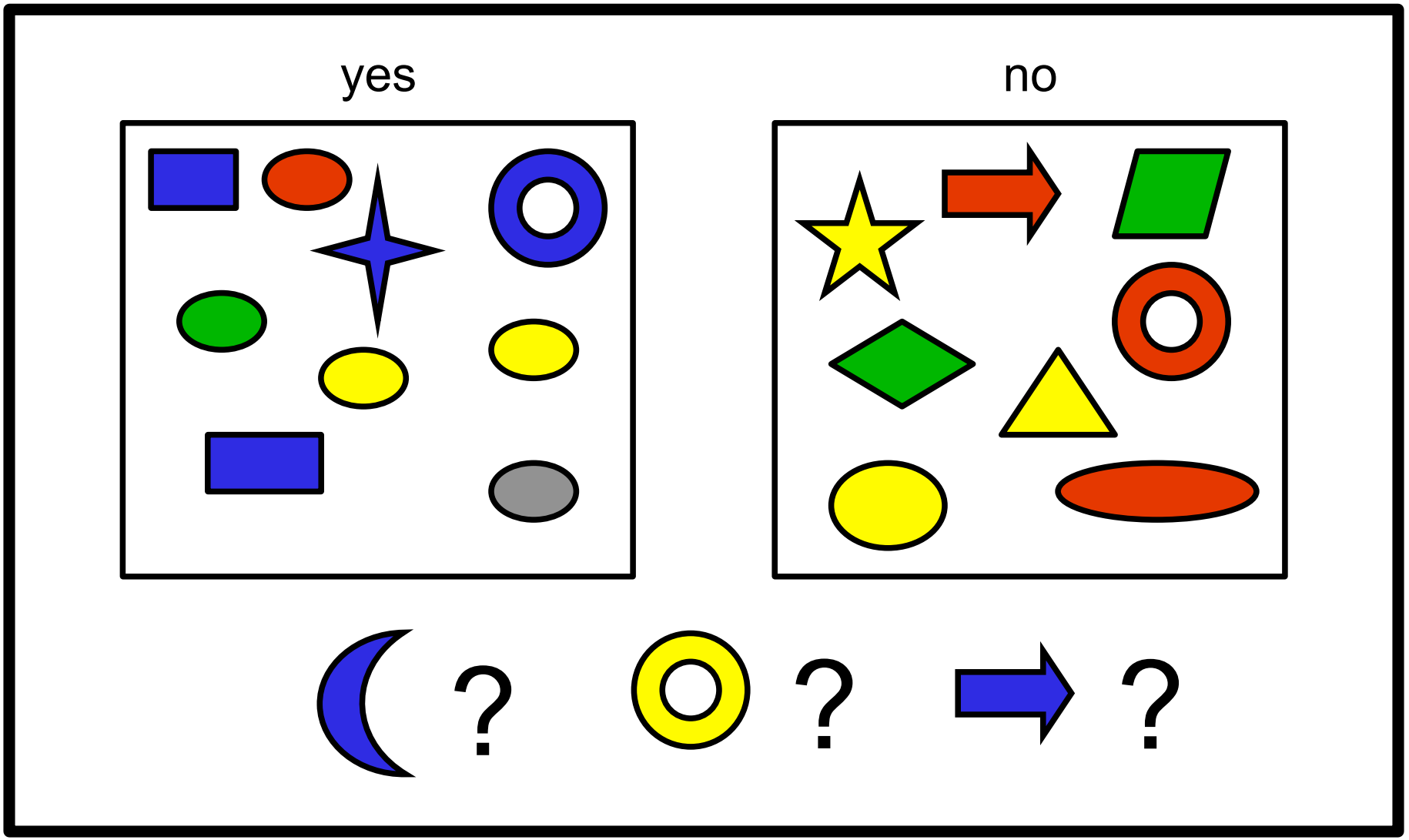
Lecture 2: Classification

Many figures courtesy Kevin Murphy's textbook,
Machine Learning: A Probabilistic Perspective

Machine Learning Problems

	Supervised Learning	***Unsupervised Learning***
Discrete	classification or categorization	clustering
Continuous	regression	dimensionality reduction

Classification Problems



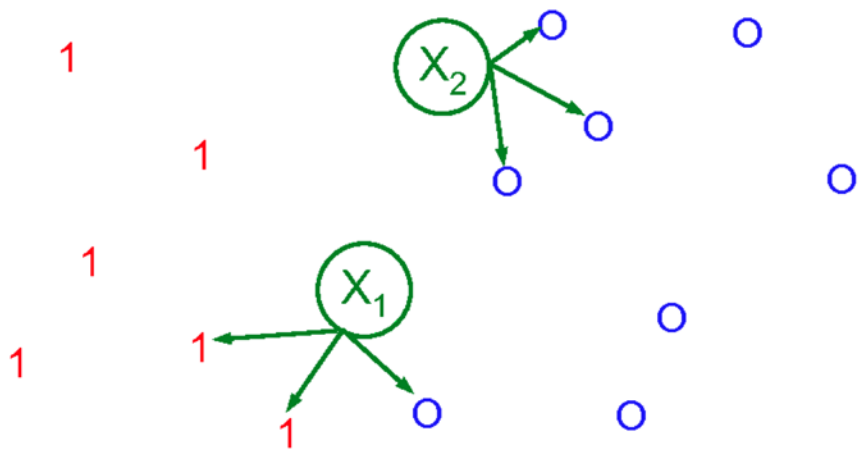
Classification Encoding

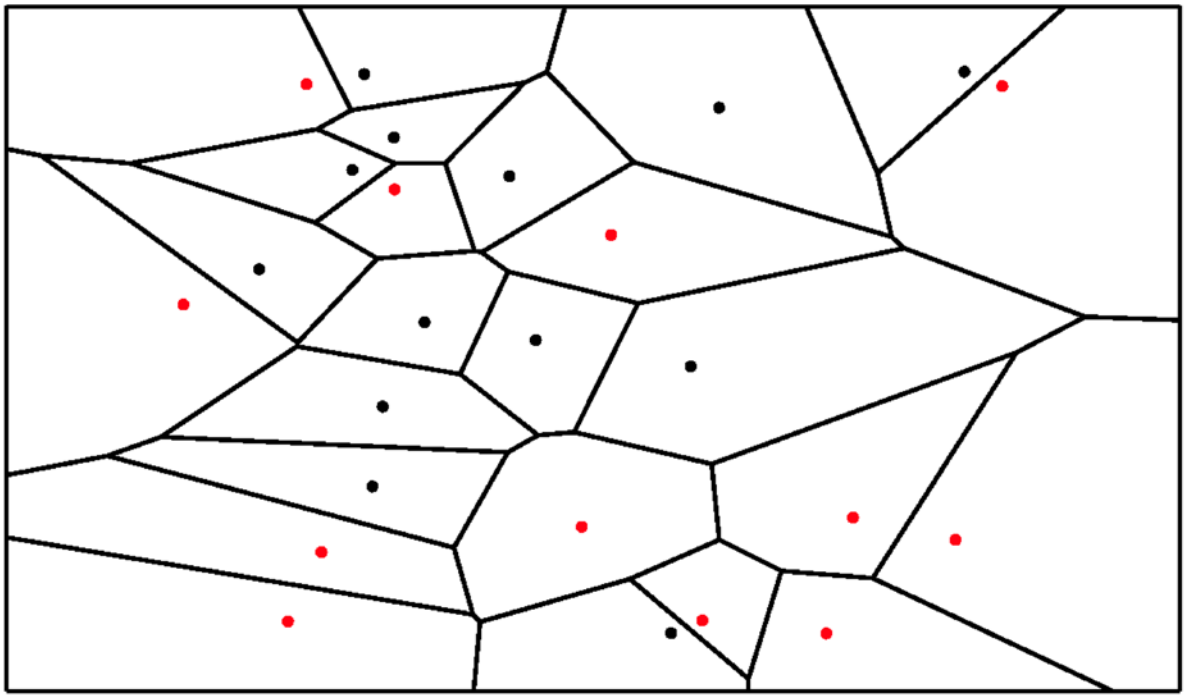
d features (attributes)

n cases

Color	Shape	Size (cm)	Binary Label
Blue	Square	10	1
Red	Ellipse	2.4	1
Red	Ellipse	20.7	0

1-Nearest Neighbor





Curse of Dimensionality