CSCI568

Discussion 15: Intro to Classification

What is Classification?

What is Classification?

"Assigning objects to one of several predefined categories."

Why Classify?

To predict the class of an unlabeled data object.

To explain or describe the elements that distinguish a category.

Example: Mammals

Example: Weather

Example: Tic-Tac-Toe

Classification Labels Are Discrete

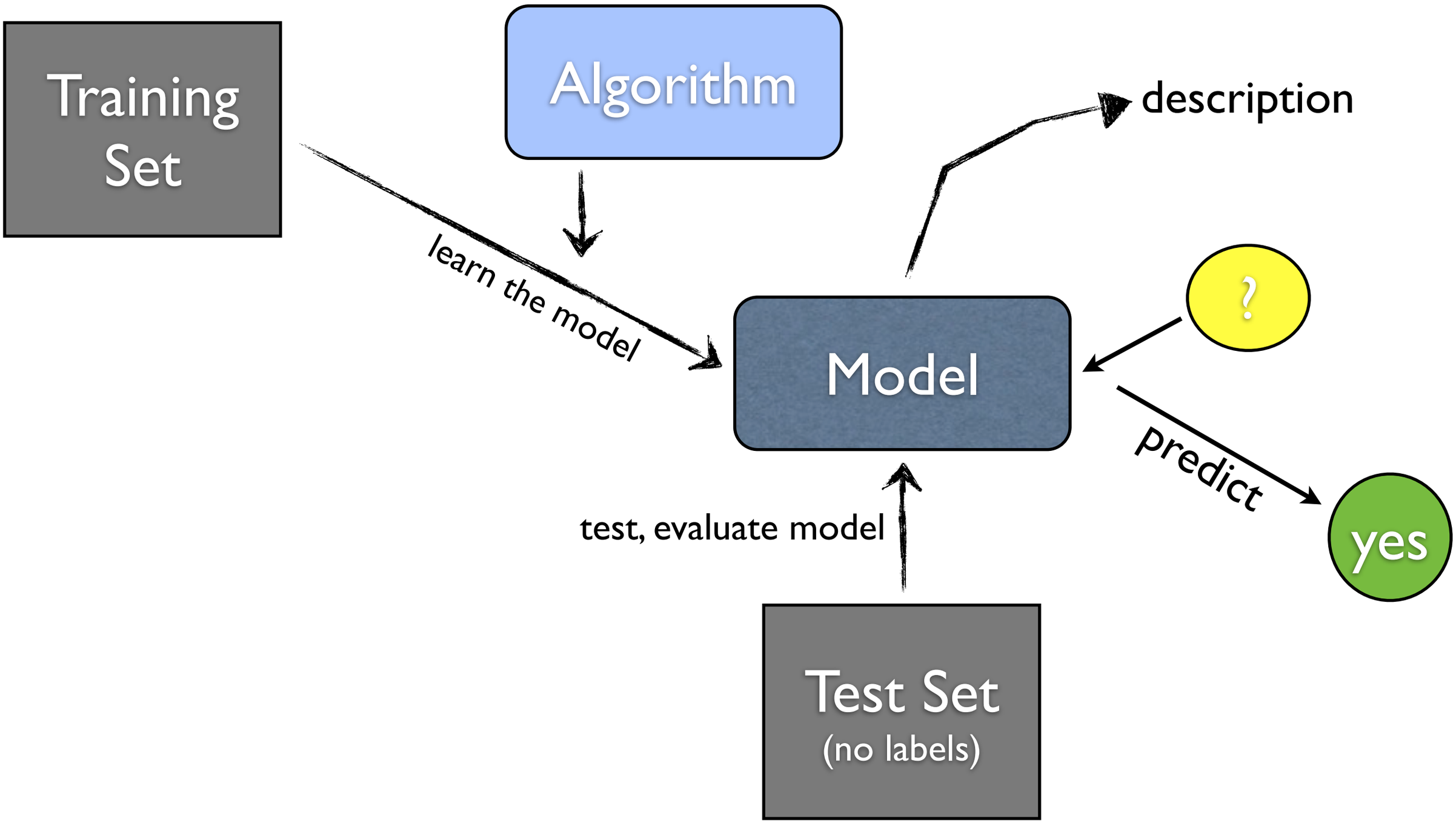
(this isn't regression analysis)

Classification

"The task of learning a target function ***f*** that maps each attribute set ***x*** to one of the predefined class labels ***y***."

"classification model"

General Approach



General Evaluation

		Predicted	
		class=1	class=0
Actual	class=1	f_{11}	f_{10}
	class=0	f_{01}	f_{00}

Accuracy?

(Error rate is similar)

$$\frac{\text{\# correct predictions}}{\text{\# total predictions}}$$

$$\frac{f_{11} + f_{00}}{f_{11} + f_{10} + f_{00} + f_{01}}$$

JIM
DWIGHT
OSCAR
DARRYL
ANDY
TOBY
PHYLLIS
ANGELA
KEVIN

STANLEY
GABE
KELLY
RYAN
OLD MAN
PAM
MEREDITH
ERIN

Homework

- Reading 12 (DM ch 4)
- Finish project 15