



DATA 8
Spring 2022

Lecture 35

Classification

Announcements

- Homework 11 due Thursday (04/21)
 - Turn in on Wednesday for a bonus point
 - Project 3 Checkpoint due Friday (04/22)
 - Entire project due Friday (04/29)
-

Prediction

Guessing the Value of an Attribute

- Based on incomplete information
 - One way of making predictions:
 - To predict an outcome for an individual,
 - find others who are like that individual
 - and whose outcomes you know.
 - Use those outcomes as the basis of your prediction.
 - Two Types of Prediction
 - Regression = Numeric; Classification = Categorical
-

Prediction Example: Spam or Not?

You made a Wells Fargo payment - wells Fargo.com You recently submitted a payment The ...

BUSINESS TRUST - -- I have a legal business proposal for you worth \$23,000,000. If you kn...

Hi - Today???!!!! What a wonderful day! Congrats again! I am definitely not doing s...

Michael Kors Handbags Up To 84% Plus Free Shipping! - Shop Handbags Online & In Store...

Machine Learning Algorithm

- A mathematical model
 - calculated based on sample data
 - "training data"
 - that makes predictions or decisions without being explicitly programmed to perform the task
-

Classification

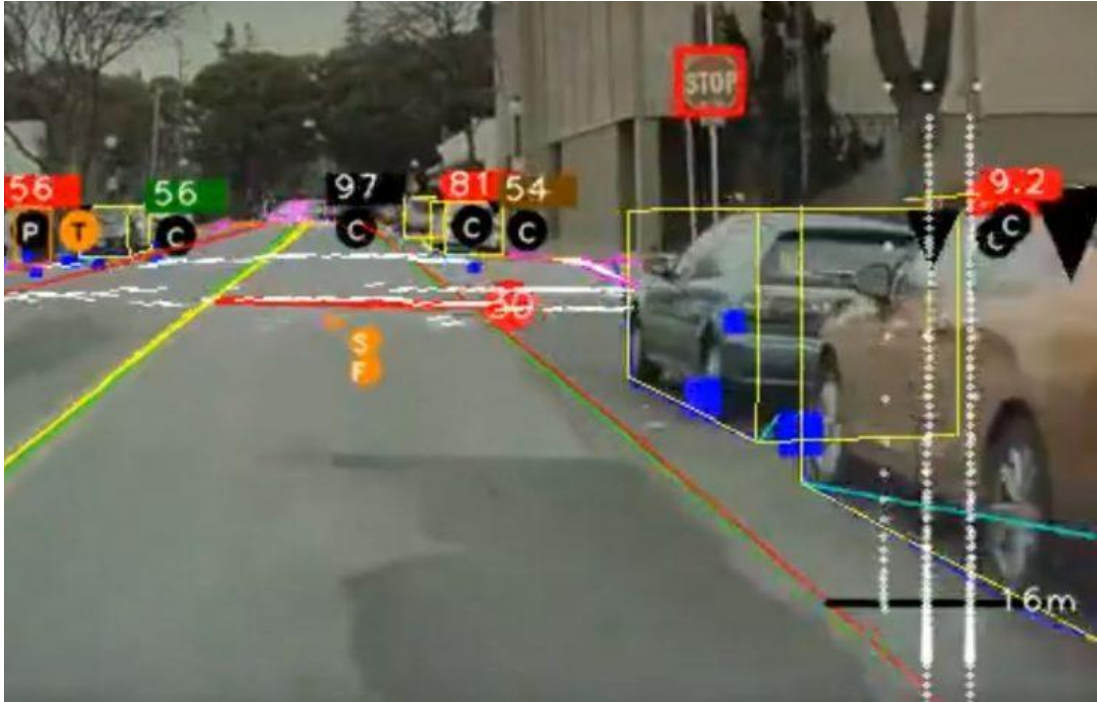
Classification Examples: Text

will be automatically deleted. [Delete all spam messages now](#)

I have a legal business proposal for you worth \$23,000,000....

Output: (Spam, Not Spam)

Classification Examples: Image



Output:
(Car,
Road,
Tree,
Sky,
Traffic Sign)

Classification Examples: Video

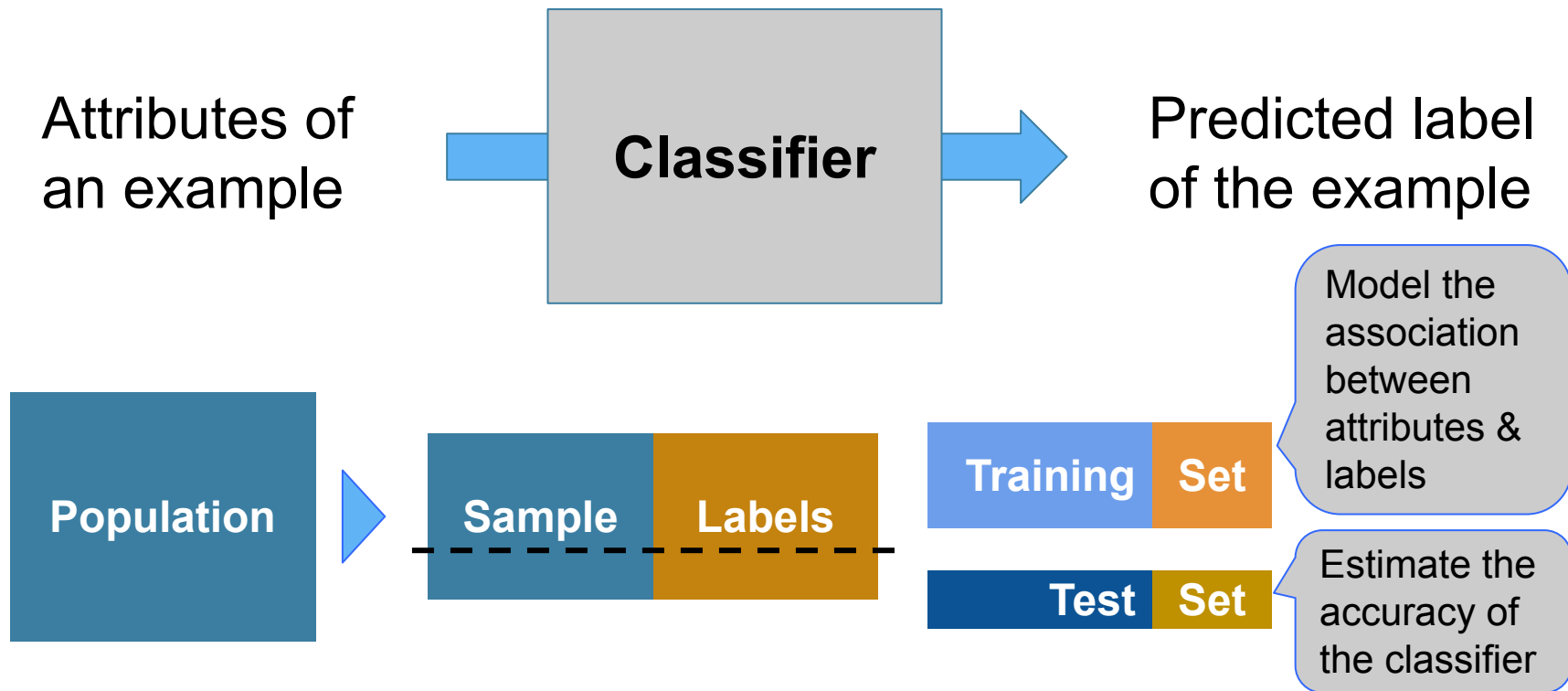


Output:
(In, Out)

(Demo)

Classifiers

Training a Classifier



Nearest Neighbor Classifier

