

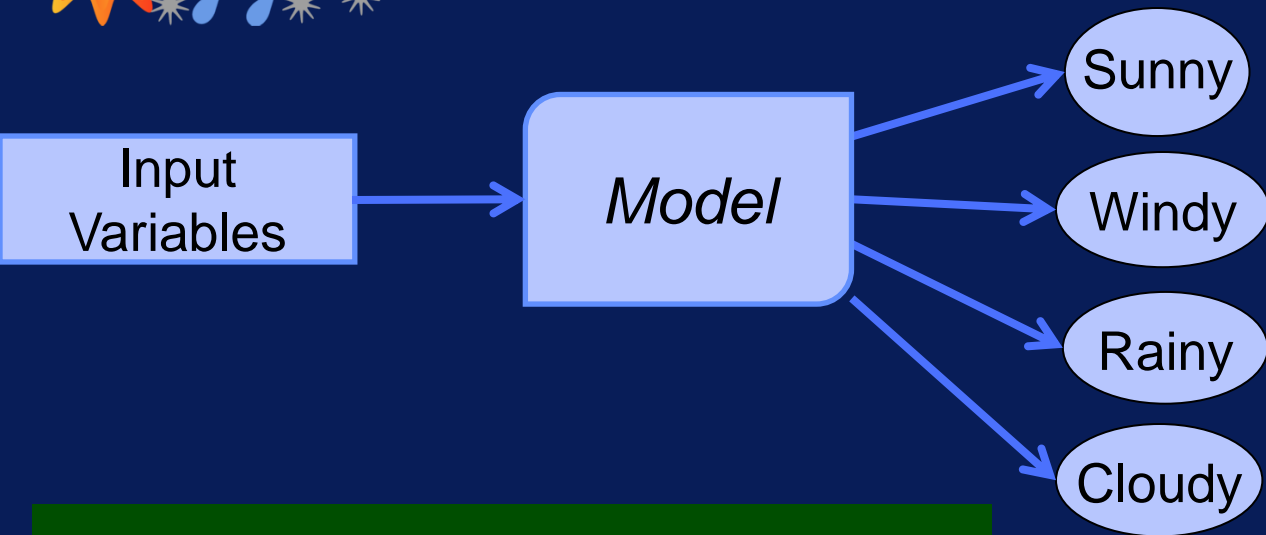
# Classification Overview

# After this video you will be able to..

- Define what classification is
- Discuss whether classification is supervised or unsupervised
- Describe how binomial classification differs from multinomial classification



# Classification



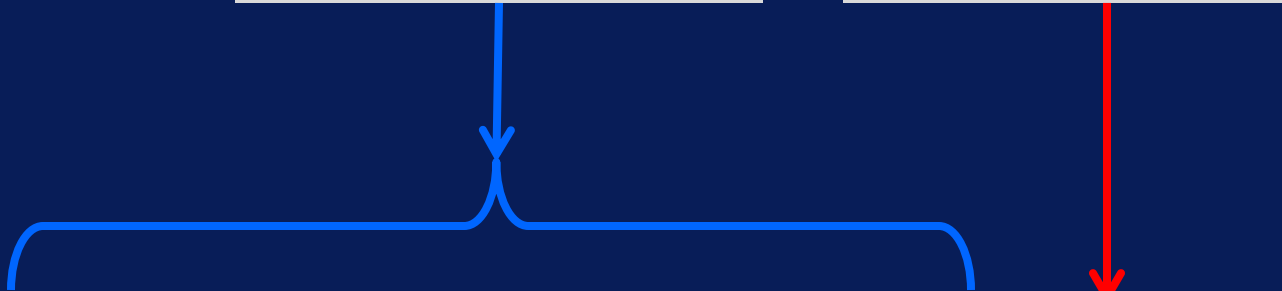
Target variable  
is categorical

Goal:  
Given input variables,  
predict category

# Data for Classification

**Input Variables**

**Target Variable**



The diagram illustrates the relationship between input and target variables. A blue bracket groups the first three columns of the table (Temperature, Humidity, Wind Speed) under the 'Input Variables' label. A red arrow points from the 'Target Variable' label to the 'Weather' column.

Temperature	Humidity	Wind Speed	Weather
79	48	2.7	Sunny
60	80	3.8	Rainy
68	45	17.9	Windy
57	77	4.2	Cloudy

# Classification is Supervised

**Target**


**Label**

**Output**

**Class Variable**

**Class**

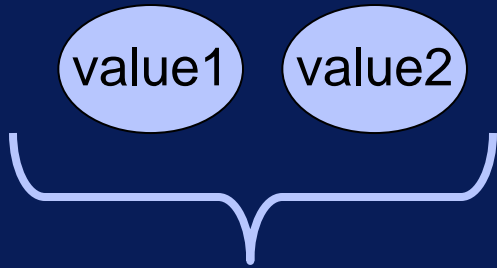
**Category**



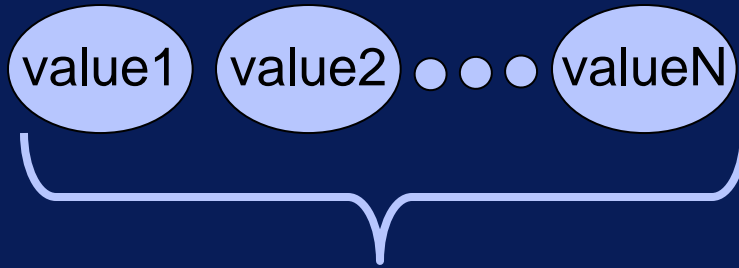
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# Types of Classification

**Binary  
Classification**



**Multi-class  
Classification**



**Target has  
two values**

**Target has > 2  
values**

# Classification Examples

## Binary Classification

- Will it rain tomorrow or not?
- Is this transaction legitimate or fraudulent

## Multi-Class Classification

- What type of product will this customer buy?
- Is this tweet positive, negative, or neutral

# Classification Main Points

- Predict category from input variables
- Classification is a supervised task
- Target variable is categorical

