분류 (Classification)

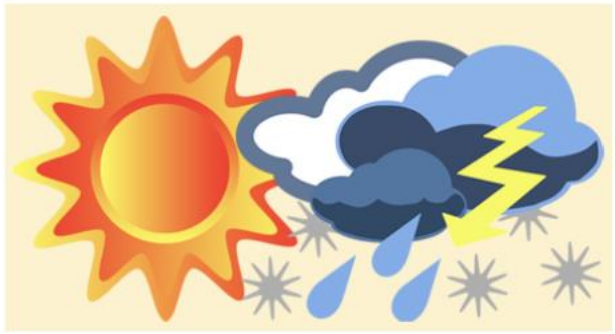
Kyungsik Han

본 영상에서 다룰 내용

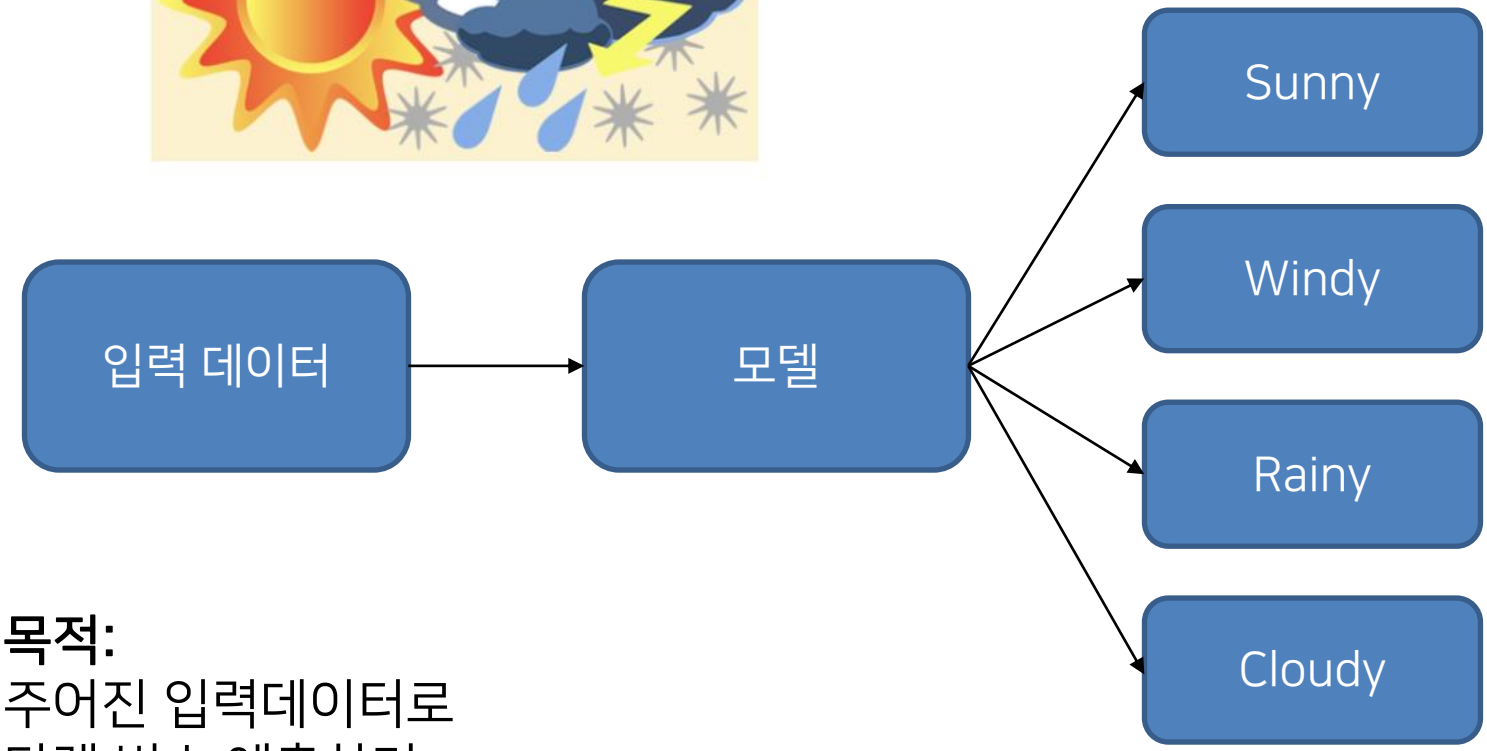
CODING

- 지도학습 분류(classification) 개념 학습

Classification (분류)



타겟 변수는 범주형(categorical)



목적:
주어진 입력데이터로
타겟 변수 예측하기

분류 데이터

Input Variables

Target Variables

Temperature	Humidity	Wind Speed	Weather
79	48	2.7	Sunny
60	50	3.8	Windy
68	45	17.9	Windy
85	77	4.2	Cloudy

분류는 지도학습

CODING

Target | Label | Category

Class | Output

Target Variables

Temperature	Humidity	Wind Speed	Weather
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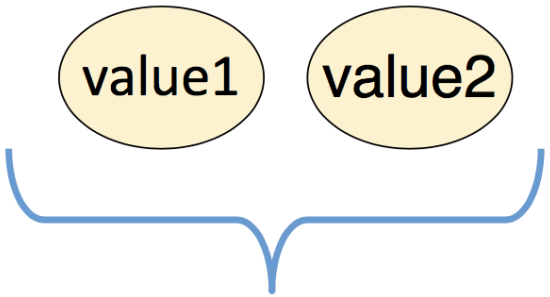
분류는 지도학습

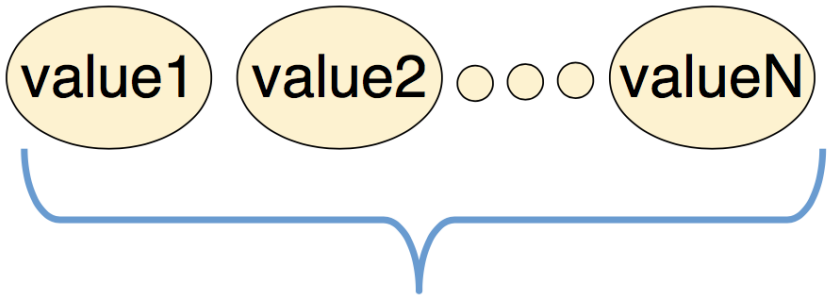
CODING

Binary Classification



Target has two values

Multi-class Classification



Target has > 2 values

분류 예제

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

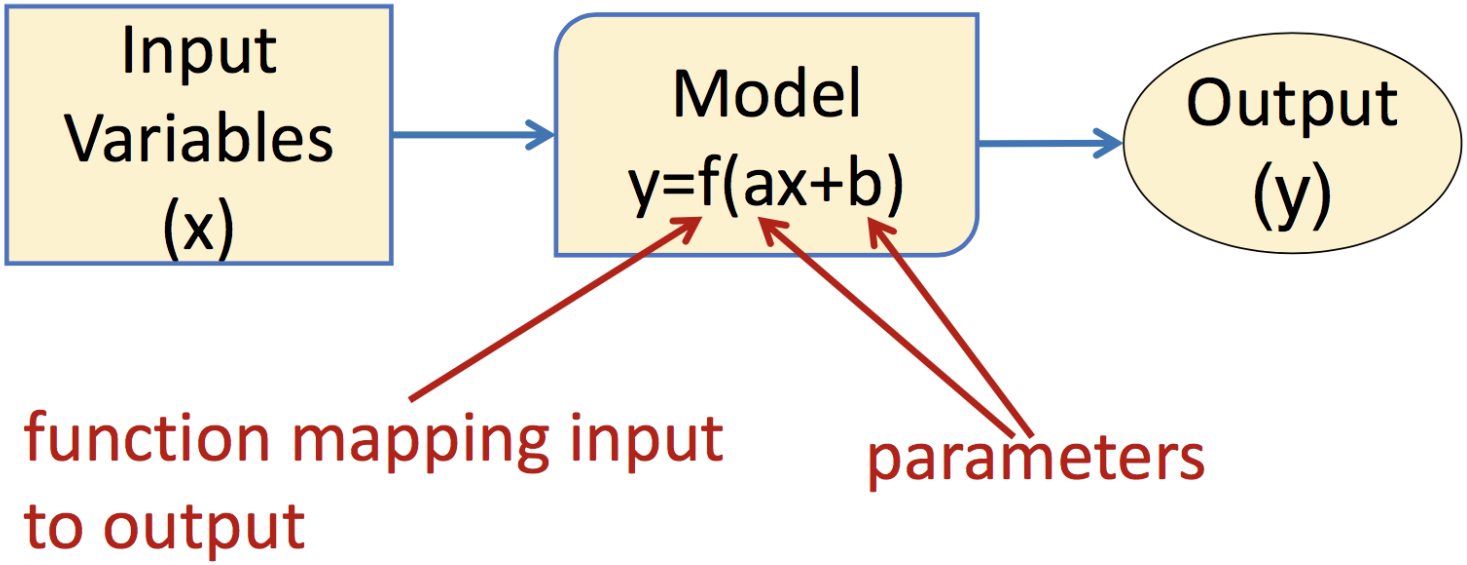
분류 정리...

- 입력 값으로부터 카테고리를 예측
- 분류는 지도학습
- 출력 값(예측 값)은 categorical(범주형)

분류 모델 구축 및 적용

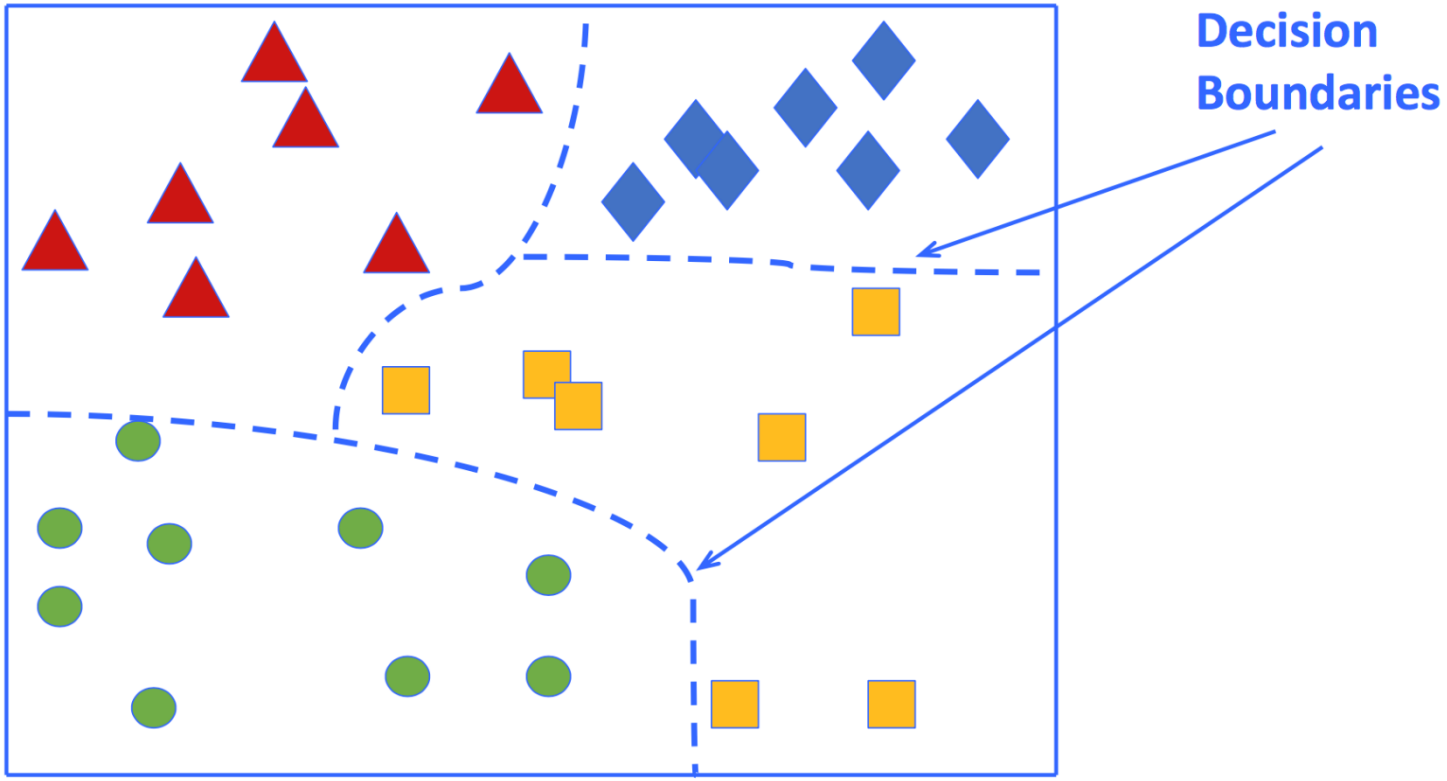
모델 만들기?

입력-출력 값을 기반으로 모델을 만들 때(훈련을 진행할 때), 모델을 구성하는 파라미터 값들이 입-출력값의 관계를 가장 잘 반영할 수 있도록 업데이트 됨



분류 모델 만들기

CODING

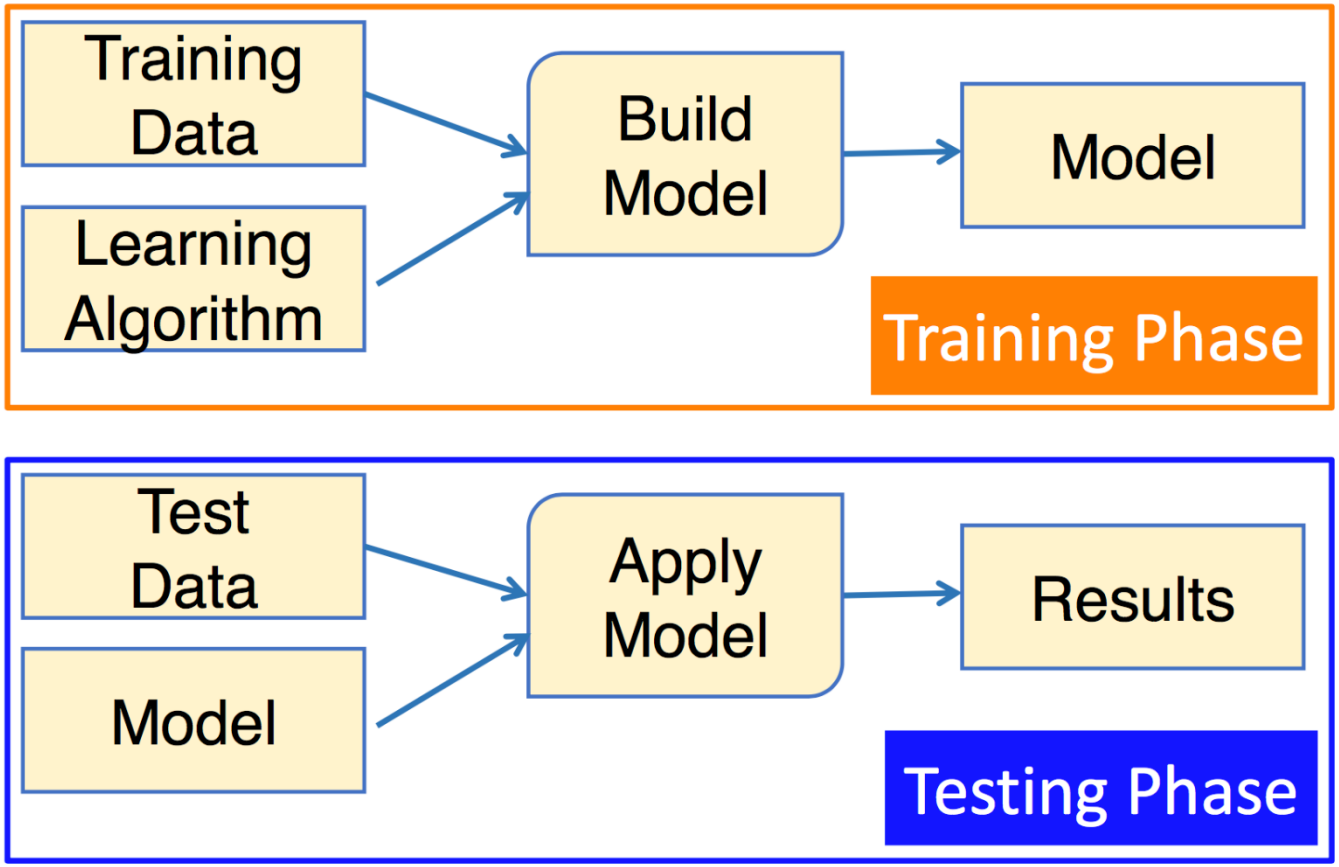


모델 구축과 적용

CODING

- Training Phase
  - Adjust model parameters
  - Use training data
- Testing Phase
  - Apply learned model
  - Use new data

훈련과 테스트


Training Data
Learning Algorithm
Build Model
Model
Training Phase
Test Data
Model
Apply Model
Results
Testing Phase

다음 영상에서 배울 내용

CODING ✖

- 지도학습 분류(classification) 알고리즘 학습
  - Logistic Regression
  - SVM
  - Decision Tree
  - Random Forest
  - kNN

수고하셨습니다