

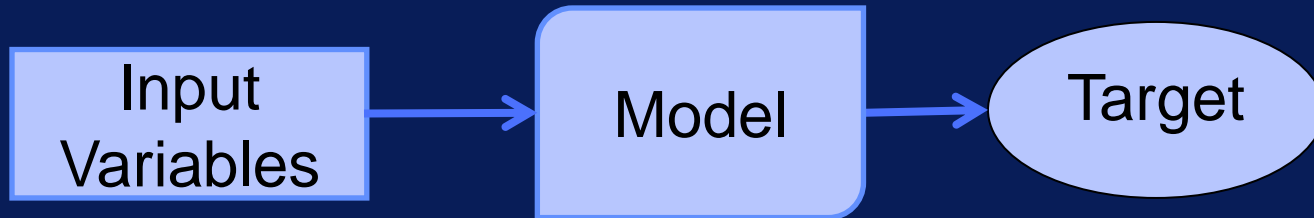
Classification Algorithms Overview

After this video you will be able to..

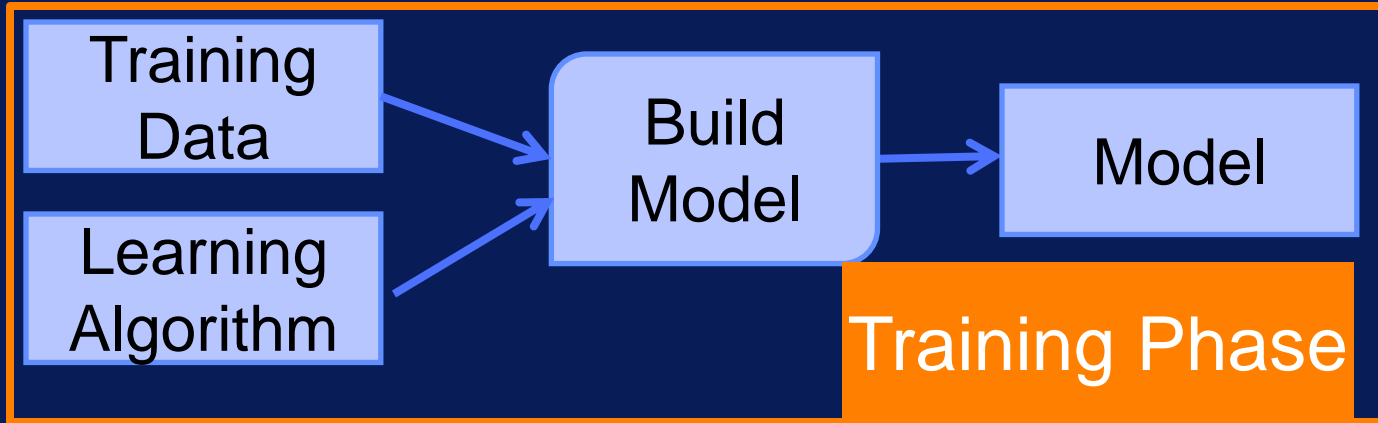
- Describe the goal of a classification algorithm
- Name some common algorithms for classification

Classification

- **Task:** Predict category from input variables
- **Goal:** Match model outputs to targets (desired outputs)



Learning Algorithm



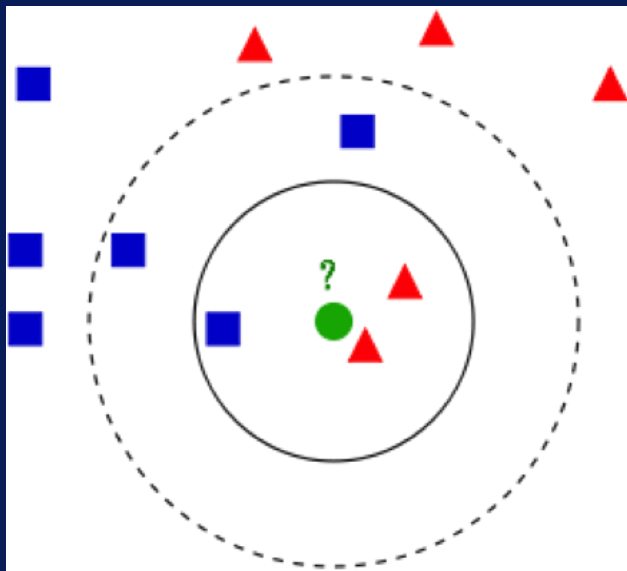
- Learning algorithm used to adjust model's parameters

Classification Algorithms

- Common basic classification algorithms
 - kNN
 - Decision tree
 - Naïve bayes

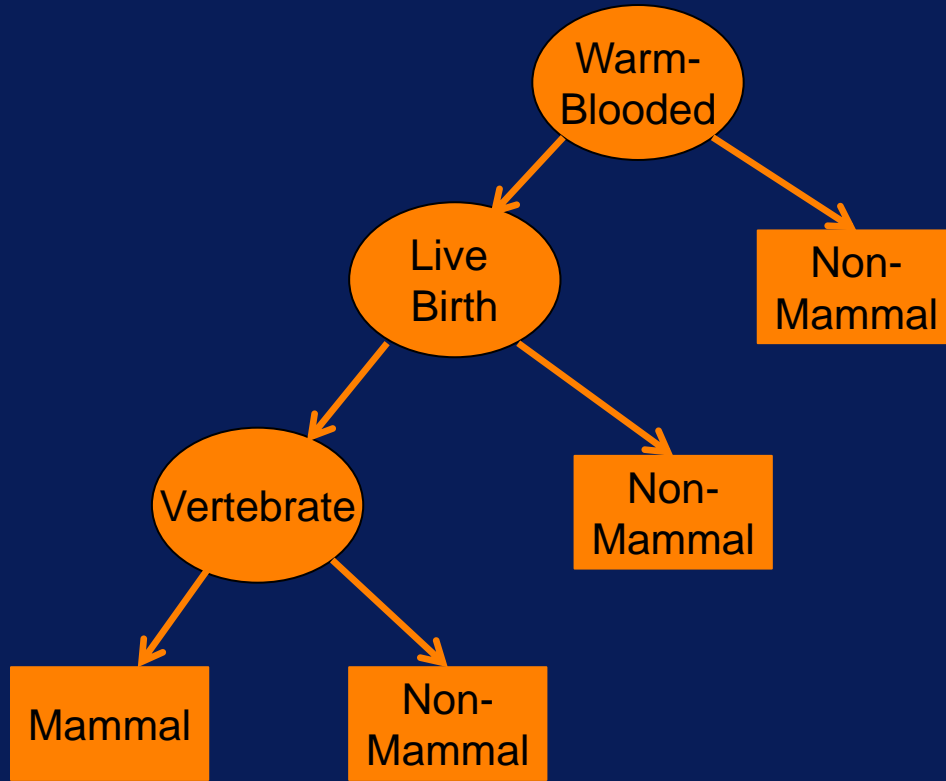
kNN Overview

- Classify sample by looking at its closest neighbors



Decision Tree Overview

- Tree captures multiple classification decision paths



Naïve Bayes Overview

- Probabilistic approach to classification

Bayes' Theorem:

$$P(A|B) = \frac{P(B|A) P(A)}{P(B)}$$

Classification Algorithms

k Nearest Neighbors

Decision Tree

Naïve Bayes

Many others ...