

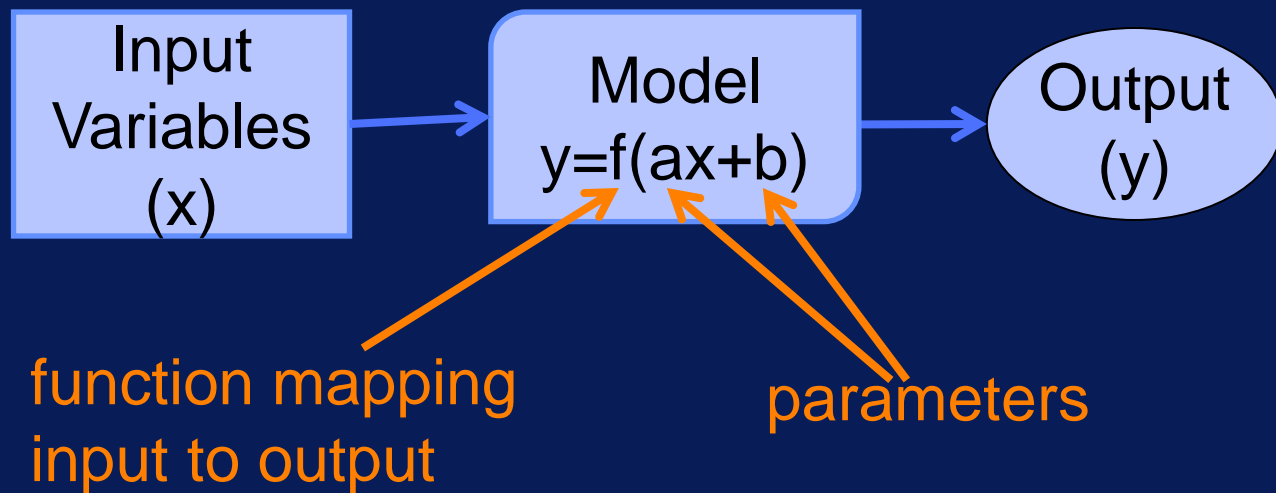
Building and Applying a Classification Model

After this video you will be able to..

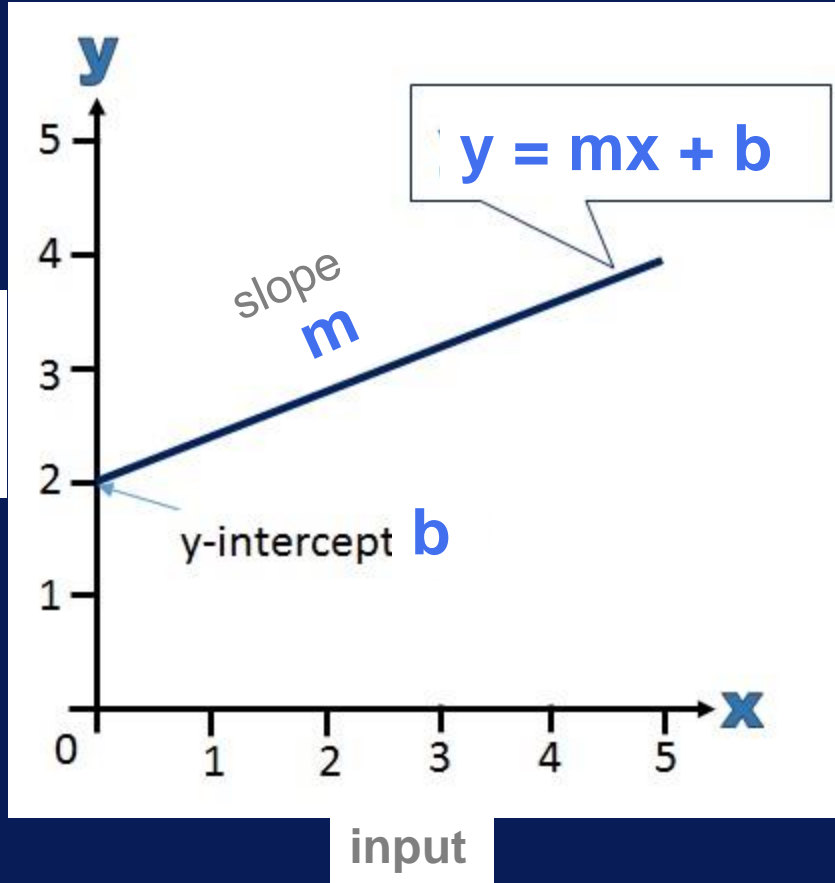
- Discuss what building a classification model means
- Explain the difference between building and applying a model
- Summarize why the parameters of a model need to be adjusted

What is a Machine Learning Model?

- A mathematical model with parameters that map input to output



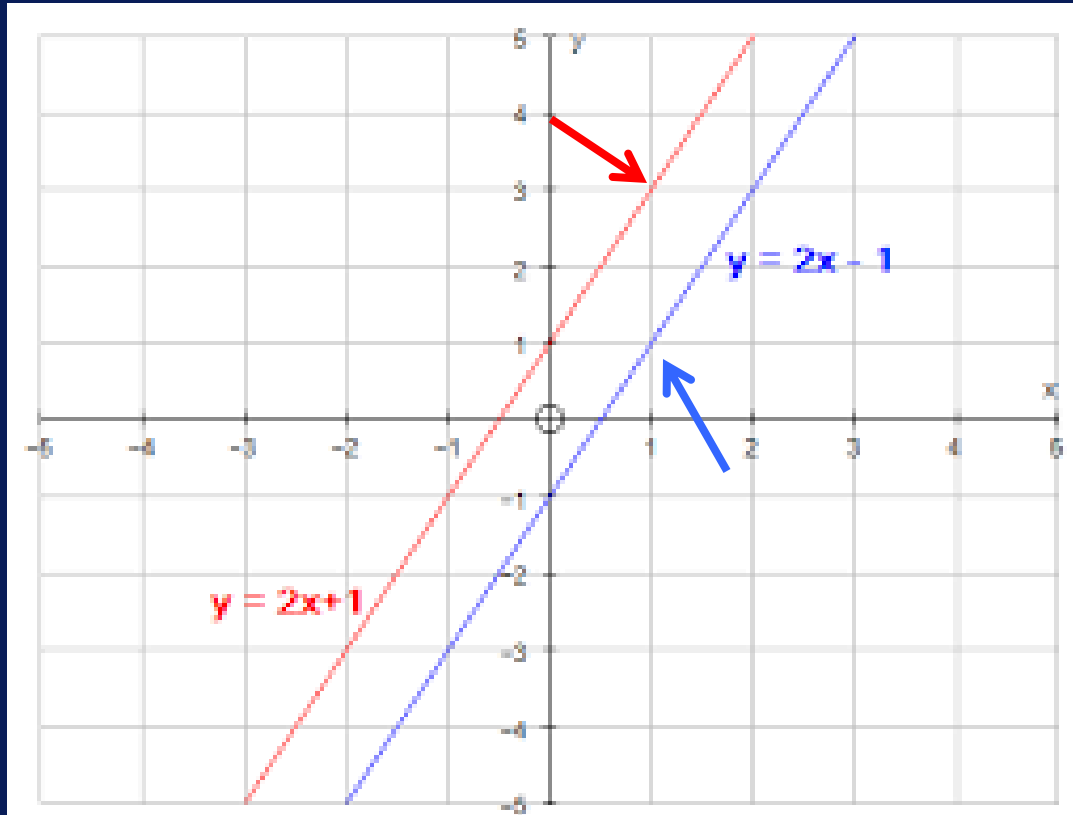
Example of Model



Adjusting Model Parameters

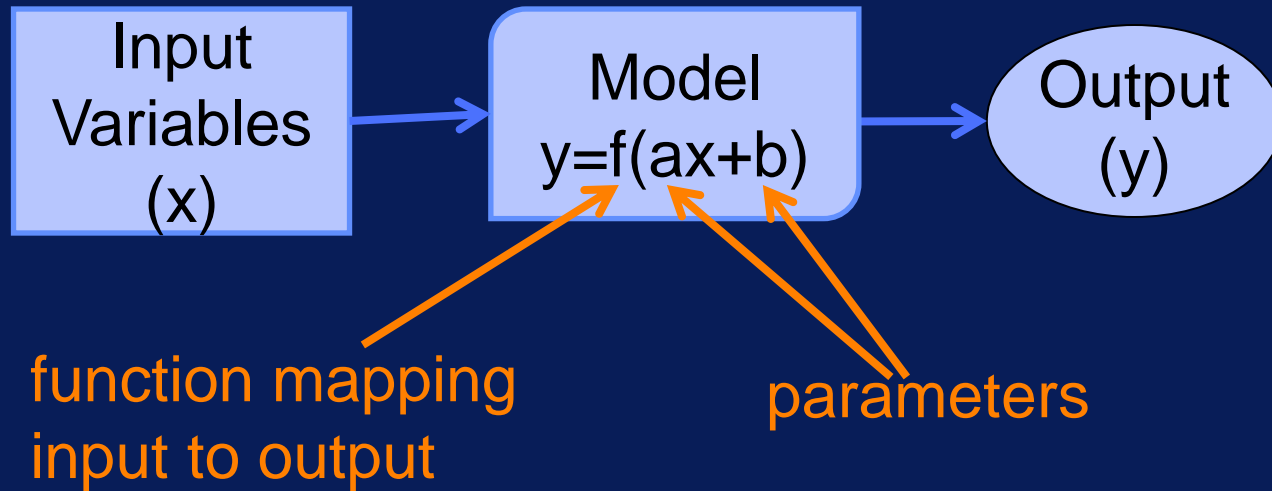
slope $m = 2$
y-intercept $b = -1$
 $x=1 \Rightarrow y=2*1-1=1$

slope $m = 2$
y-intercept $b = +1$
 $x=1 \Rightarrow y=2*1+1=3$

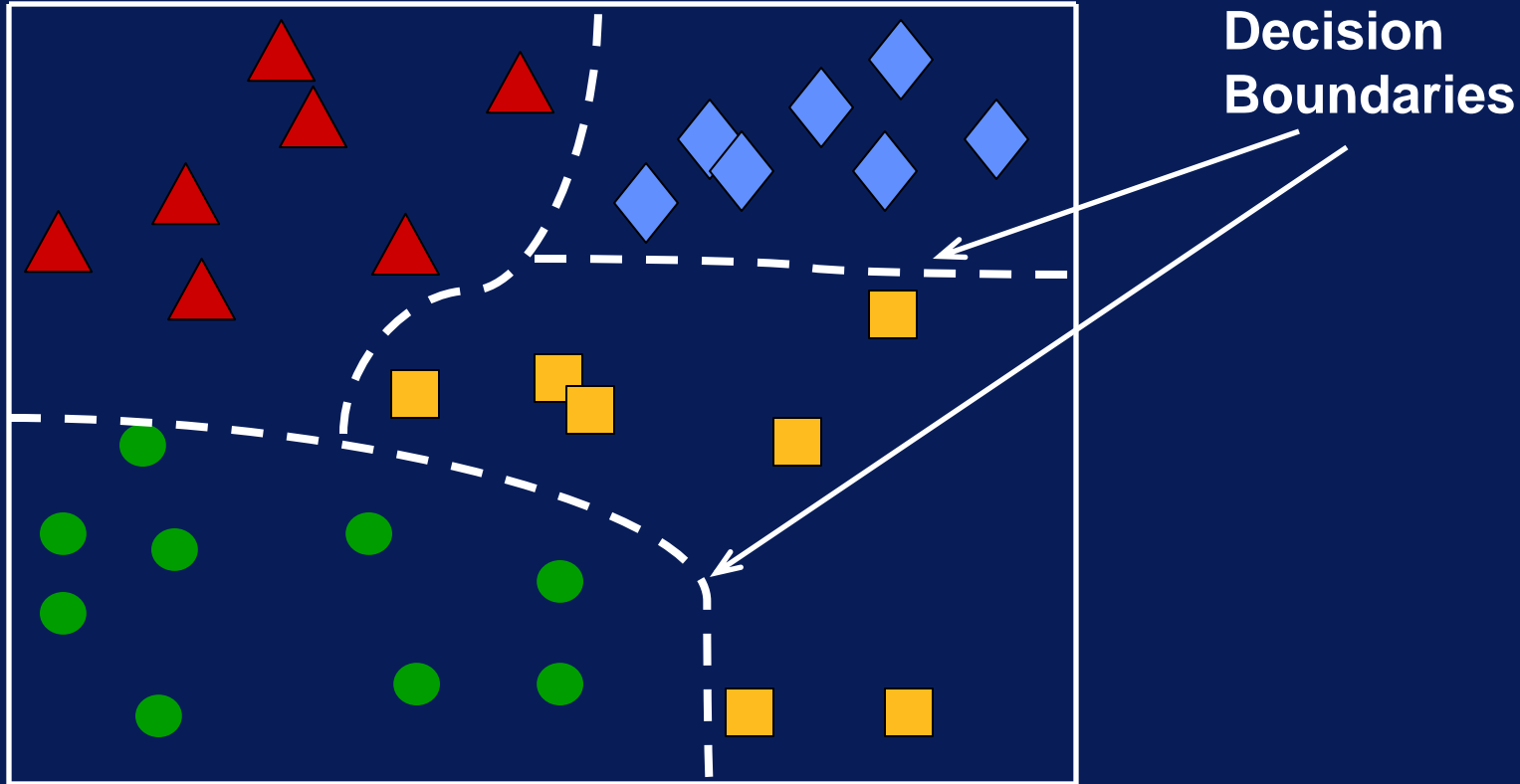


Building Machine Learning Model

Model parameters are adjusted during model training to change input-output mapping.



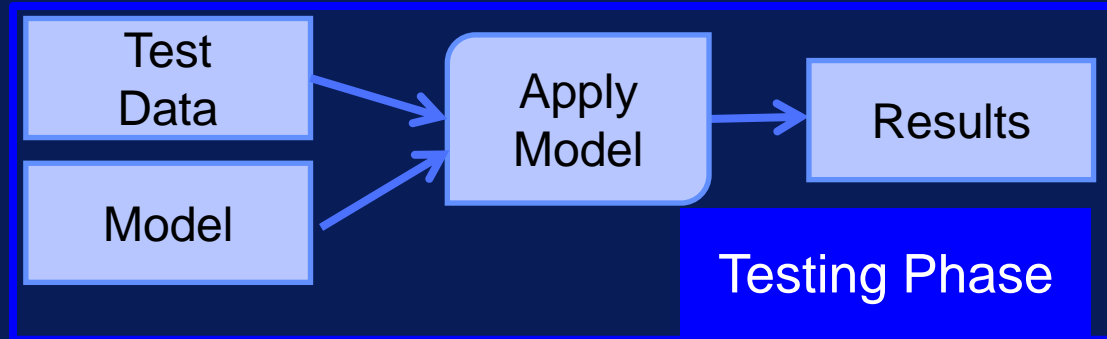
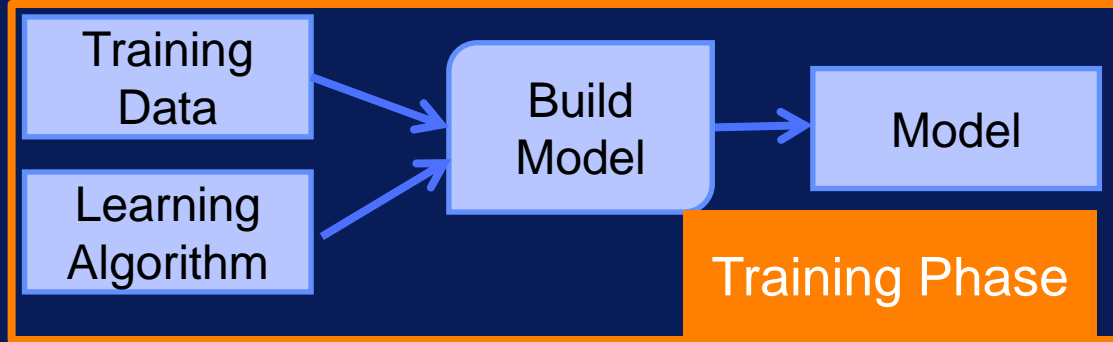
Building Classification Model



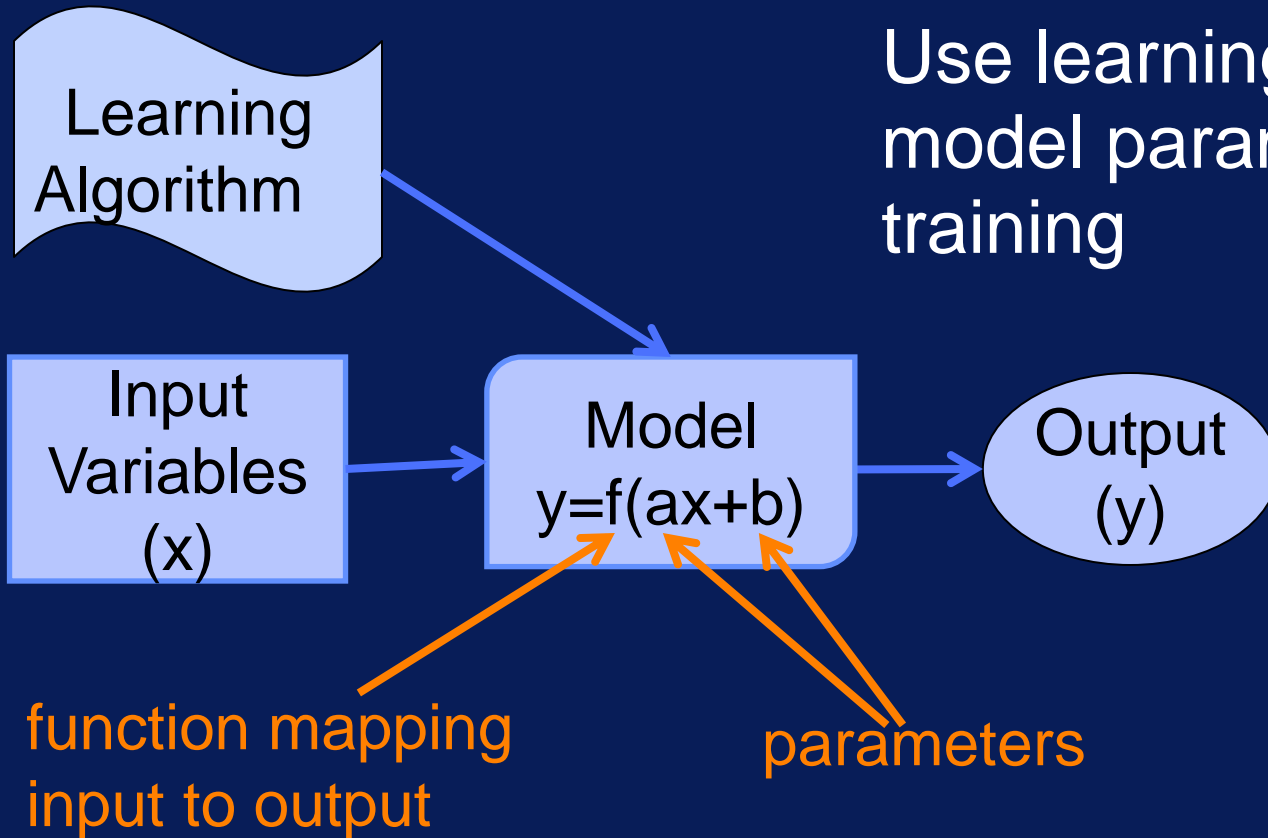
Building vs. Applying Model

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

Building vs. Applying Model



Building a Classification Model



Use learning algorithm to model parameters during training