

# Intuition for Predicting Machine

Introduction to Data Science

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# Contents

## Week 11 : Session 1

1. Training Data

2. Learning Rate

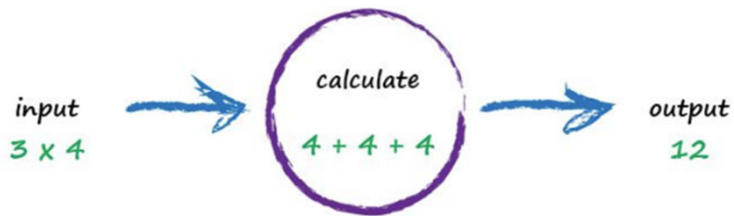
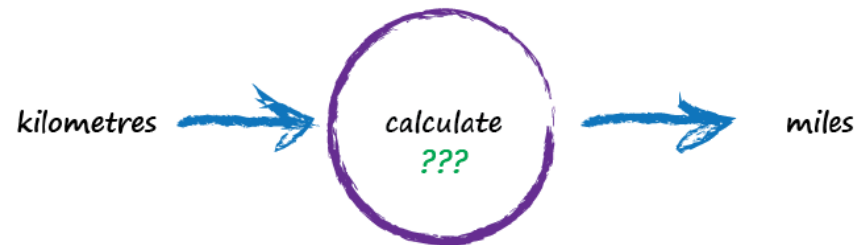
# 1 Objectives

1. Training Data

2. Learning Rate



# A Simple Predicting Machine



"miles = kilometres x c", where c is a constant. We don't know what this constant c is yet.

Pick a value at random and give it a go! Let's say  $c = 0.5$

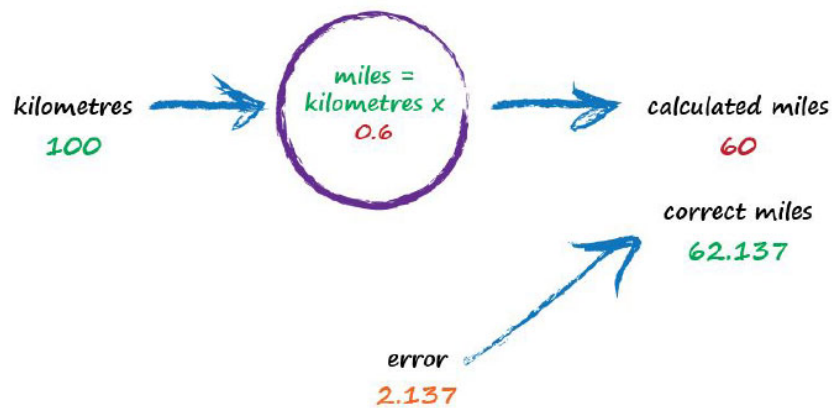


Truth Example	Kilometres	Miles
1	0	0
2	100	62.137

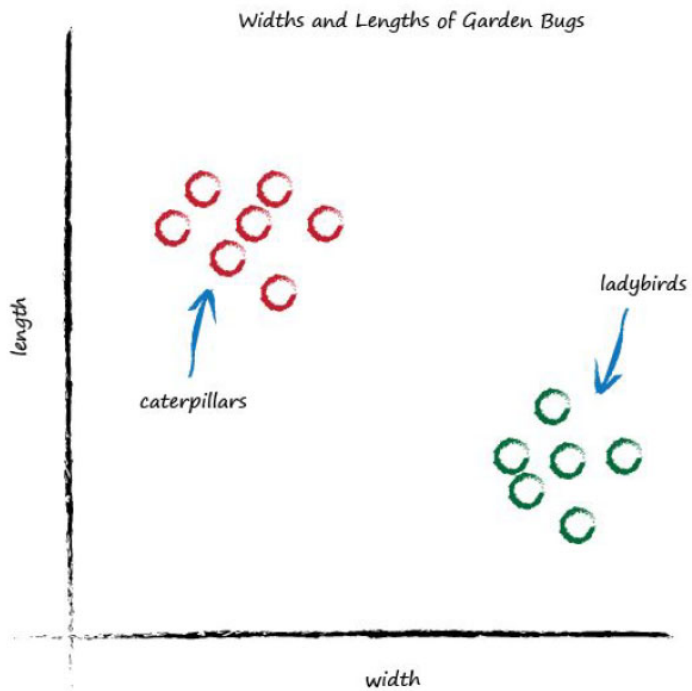
$$\begin{aligned}\text{error} &= \text{truth} - \text{calculated} \\ &= 62.137 - 50 \\ &= 12.137\end{aligned}$$



# A Simple Predicting Machine



# Classifying is Not Very Different from Predicting

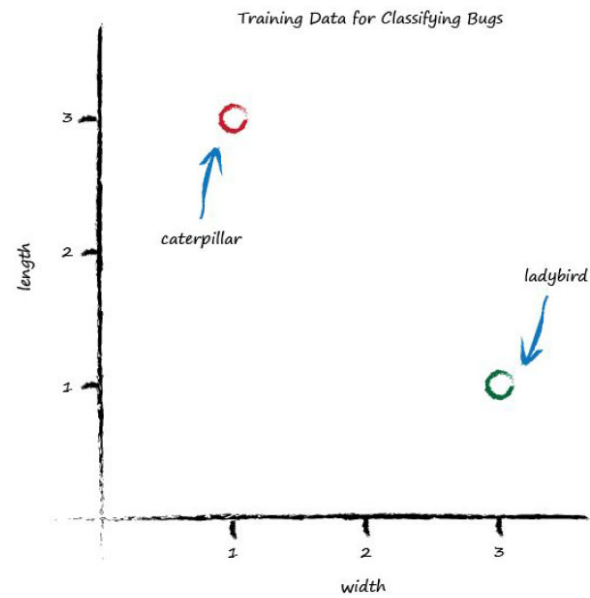


# Training A Simple Classifier

Example	Width	Length	Bug
1	3.0	1.0	ladybird
2	1.0	3.0	caterpillar

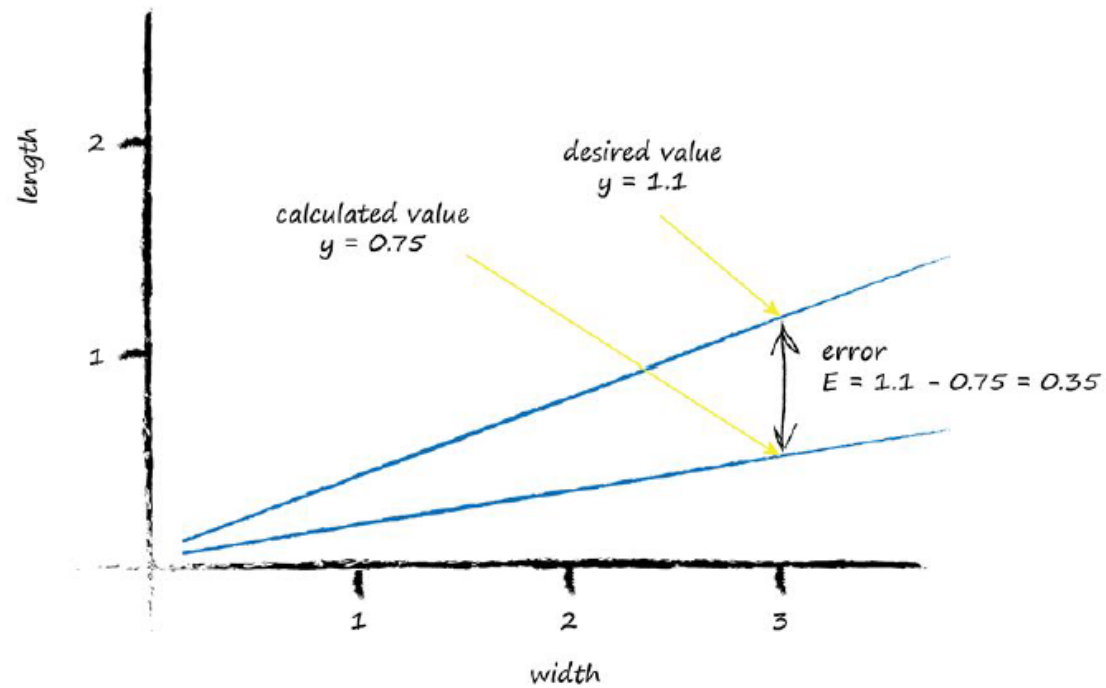
training data.

# Training A Simple Classifier

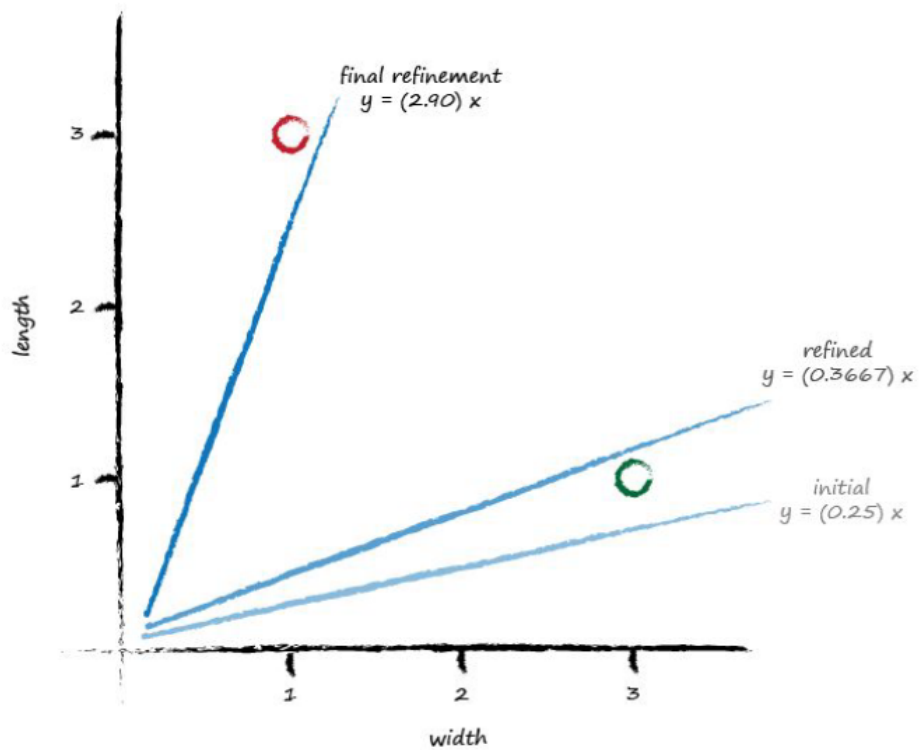




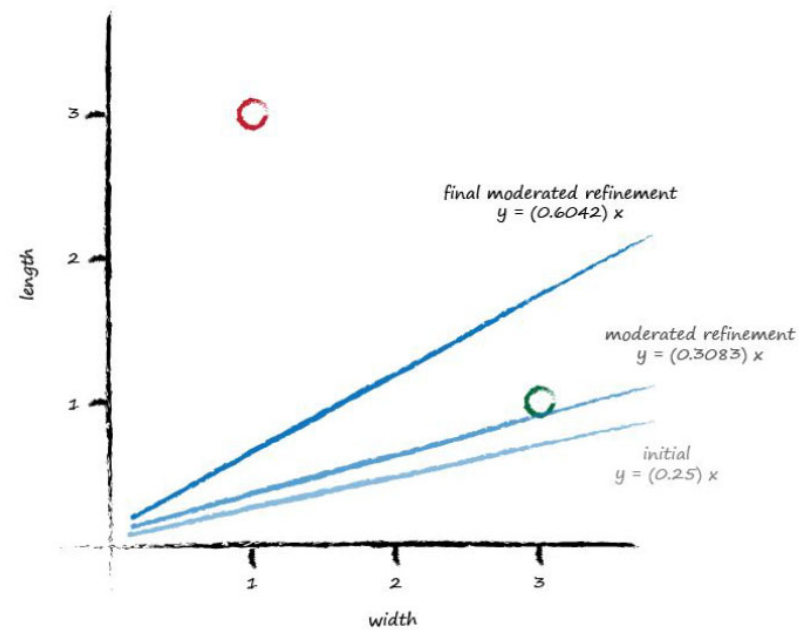
# Training A Simple Classifier



# Training A Simple Classifier



# Training A Simple Classifier



# Learning Rate