# 第一单元

Supervised vs unsupervised learning

有监督学习与无监督学习

1. Which are the two common types of supervised learning? (Choose two)
2. Clustering (聚类)
3. Regression (回归)
4. Classification (分类)

B,C

分类从有限的类别集合(也成为类)中进行预测.这些可以是一组有限的数字或者标签,如’猫’或者’狗’

1. Which of these is a type of unsupervised learning? (无监督学习)
2. Regression(回归)
3. Classification(分类)
4. Clustering (聚类)

C

# 聚类根据每个项目(如医院病人或购物客户)彼此的相似程度将数据分组到组或集群中。

# 第二单元

Regression

回归

1. For linear regression, the model is

Which of the following are the inputs, or features, that are fed into the model and with which the model is expected to make a prediction? (求自变量是哪一个)

1. and

A

在线性回归模型中 f是最终预测得到的结果, w,b是参数 x是输入的自变量

1. For linear regression, if you find parameters and so that is very close to zero, what can you conclude? (J接近0说明什么)
2. This is never possible -- there must be a bug in the code.
3. The selected values of the parameters and cause the algorithm to fit the training set really poorly.
4. The selected values of the parameters and cause the algorithm to fit the training set really well.

C

J即为损失函数,是对训练出来的模型f的预测精准度的衡量数据

# 第三单元

Train the model with gradient descent

使用梯度下降法训练模型

1. Gradient descent is an algorithm for finding values of parameters w and b that minimize the cost function J.

When is a negative number (less than zero), what happens to after one update step? (当对w求导的导数是负数时,w更新下一步会发生什么变化)

1. stays the same
2. decreases
3. increases.
4. It is not possible to tell if will increase or decrease.

c

由于α是学习速率恒为整数,故当求导结果为负数时,w是增加的

1. For linear regression, what is the update step for parameter b? (更新步长是什么)

A

文本, 信件

描述已自动生成

文本, 信件

描述已自动生成

由上图的推导过程可知b对应的x为常数1,即b对应seita0;