Linear regression summary

# Modification

텍스트이(가) 표시된 사진

자동 생성된 설명

When

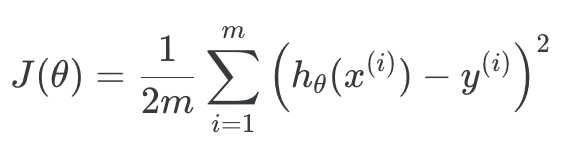
If row equal column

Example:

텍스트, 시계이(가) 표시된 사진

자동 생성된 설명

# Cost function



The vectorized version

텍스트이(가) 표시된 사진

자동 생성된 설명

# Gradient descent

텍스트이(가) 표시된 사진

자동 생성된 설명

Each must change after end all of the thing calculation.

Gradient descent have vector form.

# Learning rate alpha

If you use so small learning rate(alpha) it will be so slow.

But if you use so large alpha, it can’t arrive minimum value

If your gradient descen go up, you must reduce alpha

텍스트, 스포츠이(가) 표시된 사진

자동 생성된 설명

# Feature Normalization

When features have so difference range gradient descent will be slow

So we have to scaling a feature.

테이블이(가) 표시된 사진

자동 생성된 설명

s = sum of whole x

u = average of whole x

so, it will be like this

텍스트이(가) 표시된 사진

자동 생성된 설명

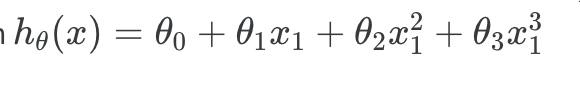
# Features and Polynomial Regression

Features can combine multiple features

For example, x3 = x1 \* x2

We can change the behavior or curve of our hypothesis function by making it a quadratic, cubic or square root function (or any other form).

For example:





# ‘Normal equation

텍스트, 손목시계이(가) 표시된 사진

자동 생성된 설명

No need feature scaling

No need to choose alpha

테이블이(가) 표시된 사진

자동 생성된 설명

n=feature k = data

If feature is more than 10000 use Gradient Descent

If it has same feature, we must remove one feature.

If n > k we have to remove feature or use regularization