Linear regression with one variable:

Cost function of linear regression with one variable:

Goal:

Gradient descent algorithm:

Repeat until convergence {

(for j = 0 and j = 1)

}

Gradient descent for linear regression:

Repeat until convergence {

}

Linear regression with multiple variables:

Cost function:

Gradient descent:

Repeat until convergence {

(for j = 0, 1, ... , n)

}

Normal equation: