Congratulations! You've completed Week 2 Start Week 3

THIS WEEK'S FORUM

Week 2

Discuss and ask questions about Week 2.

Go to forum

Linear Regression with Multiple Variables

Andrew Ng

Welcome to week 2! I hope everyone has been enjoying the course and learning a lot! This week we're covering linear regression with multiple variables. we'll show how linear regression can be extended to accommodate multiple input features. We also discuss best practices for implementing linear regression.

We're also going to go over how to use Octave. You'll work on programming assignments designed to help you understand how to implement the learning algorithms in practice. To complete the programming assignments, you will need to use Octave or MATLAB.

As always, if you get stuck on the quiz and programming assignment, you should post on the Discussions to ask for help. (And if you finish early, I hope you'll go there to help your fellow classmates as well.)

Less

Environment Setup Instructions

Reading: Setting Up Your Programming Assignment Environment 8 min

Reading: Access MATLAB Online and Upload the Exercise Files 3 min

Reading: Installing Octave on Windows 3 min

Reading: Installing Octave on Mac OS X (10.10 Yosemite and 10.9 Mavericks and Later) 10 min

Reading: Installing Octave on Mac OS X (10.8 Mountain Lion and Earlier) 3 min

Reading: Installing Octave on GNU/Linux 7 min

Reading: More Octave/MATLAB resources 10 min

Multivariate Linear Regression

Video: Multiple Features 8 min

Reading: Multiple Features 3 min

Video: Gradient Descent for Multiple Variables 5 min

Reading: Gradient Descent For Multiple Variables 2 min

Video: Gradient Descent in Practice I - Feature Scaling 8 min

Reading: Gradient Descent in Practice I - Feature Scaling 3 min

Video: Gradient Descent in Practice II - Learning Rate 8 min

Reading: Gradient Descent in Practice II - Learning Rate 4 min

Video: Features and Polynomial Regression 7 min

Reading: Features and Polynomial Regression 3 min

Computing Parameters Analytically

Video: Normal Equation 16 min

Reading: Normal Equation 3 min

Video: Normal Equation Noninvertibility 5 min

Reading: Normal Equation Noninvertibility 2 min

Submitting Programming Assignments

Video: Working on and Submitting Programming Assignments 3 min

Reading: Programming tips from Mentors 10 min

Review

Reading: Lecture Slides 20 min

Quiz: Linear Regression with Multiple Variables 5 questions

Octave/Matlab Tutorial

Andrew Ng

This course includes programming assignments designed to help you understand how to implement the learning algorithms in practice. To complete the programming assignments, you will need to use Octave or MATLAB. This module introduces Octave/Matlab and shows you how to submit an assignment.

Less

Octave/Matlab Tutorial

Video: Basic Operations 13 min

Video: Moving Data Around 16 min

Video: Computing on Data 13 min

Video: Plotting Data 9 min

Video: Control Statements: for, while, if statement 12 min

Video: Vectorization 13 min

Review

Reading: Lecture Slides 10 min

Quiz: Octave/Matlab Tutorial 5 questions

Programming Assignment: Linear Regression 3h