Machine Learning Tutorial

Winter Term 2018   3:00-3:45 TTh Mr. Gregg

What this course is about

This tutorial is a survey of machine learning techniques, including techniques for preparing data, model selection, and training. Models discussed include linear regression, support vector machines, and decision trees. You will develop hands-on experience using the Scikit-Learn library and other related libraries in the Python programming language.

Textbook

The text we will be using for this course is *Hands-On Machine Learning with Scikit-Learn and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems* by Aurélien Géron.

Course Outline

Here is a list of topics we will cover and when we will cover them.

Topic	Chapter	Date
Introduction to Machine Learning	1,2	1/4-1/11
Classification	3	1/16, 1/18
Training Models	4	1/23, 1/25
Support Vector Machines	5	1/30
Decision Trees	6	2/1, 2/6
Midterm Exam	-	2/13
Random Forests	7	2/15
Dimensionality Reduction	8	2/20, 2/22
Group Project	-	2/27 - 3/8

We will have one in-class midterm exam on February 13 and a final exam on March 14.

Grading

This is how the grades will break down:

- Programming assignments and group project - 60%

- In class midterm exam - 15%

- Final exam - 25%

The late policy for homework assignments is 5% off for each day the assignment is late, up to a maximum of 25% off. If you have a valid excuse for turning your work in late, please contact me to explain.

Course Web Site

I will be maintaining a course web site with lecture notes, assignments, and other resources at

http://www.lawrence.edu/fast/greggj/ml.html

Access to help

If you need assistance with anything, you are welcome to see me in my office or send me a question by email to greggj@lawrence.edu. My office hours this term are 2:00-4:00 MWF and 1:00-3:00 TTh. My office is 413 Briggs; the phone number there is x6736.