CS 446 - Machine Learning

Instructors:
Historically this class as almost always been taught by Dan Roth, but in Fall 2013 it was taught by Julia Hockenmaier. Both are experts in natural language processing and teach advanced courses in that area (CS 546 and CS 498, respectively).

When to Take It:
This class is only offered in the fall and CS 440 is very useful to have taken beforehand, so plan accordingly. Most students would probably take this class their Senior year or as a first-year graduate student, but with planning it can be taken Junior year. The course is about 2/3 graduate students and 1/3 undergrads. The course content is fairly mathematical, so mathematical maturity, ideally in the field of computer science, is essential. Linear algebra is also an unstated requirement for this class; it’s not essential you take a class like Math 415, but some familiarity with the ideas of linear algebra are useful or you should be prepared to do some background reading on your own.

Class Content:
Make no mistake, this is a theory course. The course expresses learning as a problem of search in a hypothesis space. Specific algorithms such as decision trees and variants of the perceptron are covered.

Work:
Workload – what do you spend your time on in this class? About how many hours per week is the homework/labs/mps? How many tests are there?

Life After:
What classes/jobs does this class prepare you for? I.e. what is this class a prerequisite for? What would someone who likes this class be interested in? Please link course numbers to the corresponding DEN pages when possible.