1. Course Overview

In this course we will take a deep dive into selected topics in data science. The focus will be two-fold. First, we will read textbook segments, classic papers, and new research, with the goal of understanding research in data science. Second, we will study the actual practical application of data science methods to extract knowledge from large-scale data.

We will cover topics such as machine learning, data mining, information retrieval, text classification, sentiment analysis, similarity analysis, network analysis, graphical models, Bayesian models, topic models, model evaluation, crowd-sourcing and micro-outsourcing, massive-scale data processing, reducing data for analytic purposes, and more. The selection of which topics are covered in a particular semester will be based on: (i) the current research and business environments, (ii) the research interests of the IS faculty, and (iii) the interests of the students in that semester.

We also will discuss applications that are of current interest, such as recommender systems, social-network marketing, online advertising, Mechanical Turkling, and more.
2. Focus and interaction

This is a seminar course. The focus will be on understanding the material through lectures, through reading papers and discussing them in class, and through specific exercises.

Worth repetition: I will use Blackboard and email as a primary means of communication. It is your responsibility to check Blackboard and your email at least once a day during the week (M-F), and you will be expected to be aware of any announcements within 24 hours of the time the message was sent.

I will check my email at least once a day during the week (M-F). I get a tremendous amount of email, and can not process it all daily. Your email will get priority if you include the special tag [DS] in the email subject header as indicated in the information block on the first page of this syllabus. I sort/filter based on this tag in order to make sure to process class mail first. I cannot guarantee to be able to process your email promptly if you do not include the special tag, as I may not read it for a while.

In general, we will follow Stern default policies unless I state otherwise. I will assume that you have read them and agree to abide by them:

http://w4.stern.nyu.edu/academic/affairs/policies.cfm?doc_id=7511

3. Readings

I will distribute readings for each class as the class progresses. This will be done primarily by posting links on blackboard. In cases where online links are not available, hardcopies will be distributed.

4. Requirements and Grading

The grade breakdown is as follows:
   1. Homeworks: 25%
   2. Term Project: 25%
   3. Participation & Class Contribution: 20%
   4. Final Exam: 30%

At NYU Stern we seek to teach challenging courses that allow students to demonstrate differential mastery of the subject matter. Assigning grades that reward excellence and reflect differences in performance is important to ensuring the integrity of our curriculum. In my experience, students generally become engaged with this course and do excellent or very good work, receiving As and B+s, and only seldom do students receive lower grades. Note that the actual distribution for this course and your own grade will depend upon how well each of you actually perform this particular semester.
Homeworks and Term Project
The homeworks and term project will be discussed in the first classes.

Participation/Contribution/Attendance/Punctuality
Please see Section 2.

Regrading
If you feel that a calculation, factual, or judgment error has been made in the grading of an assignment or exam, please write a formal memo to me describing the error, within one week after the class date on which that assignment was returned. Include documentation (e.g., a photocopy of class notes). I will make a decision and get back to you as soon as I can. Please remember that grading any assignment requires the grader to make many judgments as to how well you have answered the question. Inevitably, some of these go “in your favor” and possibly some go against. In fairness to all students, the entire assignment or exam will be regraded.

FOR STUDENTS WITH DISABILITIES: If you have a qualified disability and will require academic accommodation during this course, please contact the Moses Center for Students with Disabilities (CSD, 998-4980) and provide me with a letter from them verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.

Please read the policies for Stern courses
http://w4.stern.nyu.edu/academic/affairs/policies.cfm?doc_id=7511

Please keep in mind the Stern Honor Code
http://www.stern.nyu.edu/mba/studact/mjc hc.html