



Course CS 6375.501 – Machine Learning
Professor Dr. Anurag Nagar
Term Fall 2015
Meetings M, W 5:30 – 6:45 PM, Location: ECSS 2.412

Professor's Contact Information

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Office Location ECSS 4.403
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Office Hours M, W: 3:15 – 5:15 PM; Fri: 6:45-7:45 PM in GR 3.420
Other Information Walk-in during office hours is encouraged. At other times, email is the best method of contact.
MidTerm October 5, 2015 during class
Final December 16, 2015 Time: 5:00pm-7:45pm Location: ECSS 2.412

General Course Information

Pre-requisites, Co-requisites, & other restrictions CS5343 Algorithm Analysis and Data Structures.
You are expected to have basic programming skills as well as knowledge of elementary data structures and probability theory

Course Description The main objective of this course is to introduce students to machine learning, the study of computer systems that improve their performance *automatically* through experience. Students will learn the latest machine learning algorithms and models that constitute typical machine learning systems. They will also gain the necessary foundations and background to both build practical machine learning systems and conduct research in machine learning.

Learning Outcomes Ability to understand and apply basic learning algorithms
Ability to understand and apply computational learning theories
Ability to understand and apply advanced learning algorithms

Required Texts & Materials [Machine Learning](#) by Tom Mitchell.
[Machine Learning: a Probabilistic Perspective](#) by Kevin Murphy.
[Pattern Recognition and Machine Learning](#) by Christopher M. Bishop.

Suggested Texts, Readings, & Materials [Pattern Classification, 2nd Edition](#) by Richard O. Duda, Peter E. Hart, David G. Stork.
[The Elements of Statistical Learning: Data Mining, Inference, and Prediction](#) by Trevor Hastie, Robert Tibshirani and Jerome Friedman.
[Data Mining: Practical Machine Learning Tools and Techniques \(Third Edition\)](#) by Ian H. Witten, Eibe Frank and Mark A. Hall.
[Principles of Data Mining \(Adaptive Computation and Machine Learning\)](#) by David J. Hand, Heikki Mannila and Padhraic Smyth.

Assignments & Academic Calendar

Assignments will be through eLearning.

For academic calendar see:

<https://www.utdallas.edu/academiccalendar/files/AcademicCalendarFall2015.pdf>

Course Policies

Grading (credit) Criteria	40% Homework, 25% Midterm, 30% Final, 5% Quizzes and Class Participation.
Late Work	5% penalty for each late day
Class Attendance	Classroom attendance is required. Surprise quizzes and classroom assignments will be administered.
Classroom Citizenship	Please be considerate of fellow students and the instructor. Please turn off all electronic devices during class hours. Participate actively in classroom and online (through eLearning) discussion.
Comet Creed	<i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i> <i>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</i>
UT Dallas Syllabus Policies and Procedures	<i>The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.</i> <i>Please go to http://go.utdallas.edu/syllabus-policies for these policies.</i>

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.