

S504 Advanced Topics in Data Mining Techniques

Fall 2007, Instructor: Dr. Milos Manic

<http://husky.if.uidaho.edu/ee578s07/>

Class policy

Course outline:

Course title: CS504 Advanced Topics in Data Mining Techniques (3 cr)

Topics: This is an advanced topics course in Data Mining or Knowledge Discovery from Data (KDD) Systems. The course will develop a theoretical framework for major issues in data mining. Data preprocessing, reduction, data warehouse to data mining, mining frequent patterns, associations, and correlations, classification and prediction, cluster analysis, and mining stream, time-series, and sequence data mining, Bayesian classification, decision tree induction, classification by backpropagation and support vector machines, will be emphasized through optimization techniques, aspects of fuzzy logic and neural networks.

Because of the multifaceted nature of the course, only undergraduate seniors with mathematical and system maturity will be permitted to take this graduate course. Mastery of the theoretical foundations will be tested but the major goal of this course is the design and implementation of an advanced data mining system with expectations of optimal performance and flexibility. Prereq: Graduate standing or instructor permission.

This course was offered for the first time at the University of Idaho.

To be offered: Fall 2007 in Idaho Falls (live) and via WebCT (outside of Idaho Falls). <http://husky.if.uidaho.edu/ee578s06/>

Credits: 3 credit course

Schedule (tentative):

Tuesday and Thursday, 12:00pm - 01:15pm mdt

Office (tentative):

hours Tuesday and Thursday, 11:00am - 12:00pm mdt (please make an appointment)

Location:

Live in Idaho Falls (CHE 307), web based course (WebCT) outside.

Instructor:

Milos Manic, Ph.D.
University of Idaho
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Idaho Falls, ID 83402;

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email: misko@uidaho.edu

url: <http://www.cs.uidaho.edu/people.html>

url: <http://husky.if.uidaho.edu>

Class web page:

<http://www.husky.if.uidaho.edu/DMf07/>

WebCT url: please refer to course url above.

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Tentative Semester Schedule

Aug. 28	Fall 2007 semester begins
Oct. 04	Exam #1
Nov. 19-23	Fall recess
Nov. 22-23	Thanksgiving - UI Closed
Dec. 03-07	No examination week
Dec. 10-14	Final Exam (Final examinations week)
Dec. 14	Close of fall semester
Dec. 18	Fall semester grades due 12pm

Paper:

Paper first draft due: Sep 27

Paper second draft due: Oct 25

Paper final submission: Nov 23

Paper presentation: week of Dec 03

For your reference, UI Academic Calendar is given at:

<http://www.students.uidaho.edu/registrar/calendars.html>

Grading system:

Two exams, team project and report, in class presentations, and homework assignments.

Grading policy & tentative grades::

Homework	30%
Exams #1, #2	30%
Paper	40%

A (90 - 100) %

B (80 - 89) %

C (70 - 79) %

D (50 - 69) %

F (0 - 49)

Homework assignments:

The homework will emphasize the important features of the text and lecture materials, such as: design, simulation and evaluation of specially assigned data mining concepts and techniques. **Homework will be picked up and graded.**

Paper

Required paper can have more of a research (theoretical) or more of a project (applicative) flavor. The purpose of the project paper is to demonstrate the ability to apply learned algorithms on real world problems. Research paper is not required but is encouraged.

Exams

The exams will be similar to the homework problems. All exams must be taken.

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Plagiarism:

Code reuse is encouraged - after all, there is no point in inventing the wheel :). However, if you reuse code, do not forget to properly include reference (& url, if applicable). *If you claim that code is yours and shows up it is not, submitted assignment will be considered as plagiarism, and will be graded with zero points.* Some examples are made or modified by course instructors and officially available on some University of Idaho pages. Such examples are copyrighted and not available for further use.

Computer misuse:

Computer misuse is a felony in the State of Idaho. We will cooperate fully with the FBI, campus IT staff, and local law enforcement if the need arises.
