CSE 801B: Introduction to Data Mining

Fall 2024

Course Information

This course will cover core topics in data mining and their applications. The topics covered include classification, association, clustering, and anomaly detection. The course aims at helping the students understand different techniques that can be applied for different problems and their limitations, evaluate the results and select the appropriate methods when faced with a new problem. It will give students hands-on experience applying those techniques by implementing a complete solution using one or more data mining software packages.

Class Information

Lecture hours: Tues/Thu 12:40pm - 2:00pm
Lecture room: TBD

Instructor

Zijun Cui
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Teaching Assistant

Francisco Santos
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Recommended Textbooks

- Introduction to Data Mining
  By: Pang-Ning Tan, Michael Steinbach, Vipin Kumar

- Data Mining: Practical Machine Learning Tools and Techniques **
  Morgan Kaufmann series in data management systems
  By: Ian Witten, Eibe Frank, Mark Hall

- Data Mining for Business Analytics **
  By: Galit Shmueli, Peter C. Bruce, Nitin R. Patel
- Python Data Science Handbook
  By: Jake Vanderplas

  **Electronic resource available through MSU libraries website: http://www.lib.msu.edu/*

Grading Policy

The student's final grade will be based on points earned on the exams, homework assignments and final project. The grade will be based on the following scheme:

Homework (5)   35%
Exams (2)   30%
Project   35%

Additional Course Policies

- Homework assignments are due by the due date. Late submissions will be deducted 50% (if submitted within two days after the deadline). Assignments submitted more than two days after the deadline will not be accepted.

- You are encouraged to form study groups to learn the materials in class. However, all submitted assignments (including computer programs) must be your own work. If plagiarism is detected, students will automatically receive a 0 for the grade and will be reported to the university.

Academic Honesty

Article 2.3.3 of the Academic Freedom Report states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the Computer Science department adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the allUniversity Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See Spartan Life: Student Handbook and Resource Guide and/or the MSU Web site: www.msu.edu). Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including lab work, quizzes, tests and exams, without assistance from any source.

The Spartan Code of Honor Academic Pledge

As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor in ownership is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do.