Data Mining

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DATA MINING

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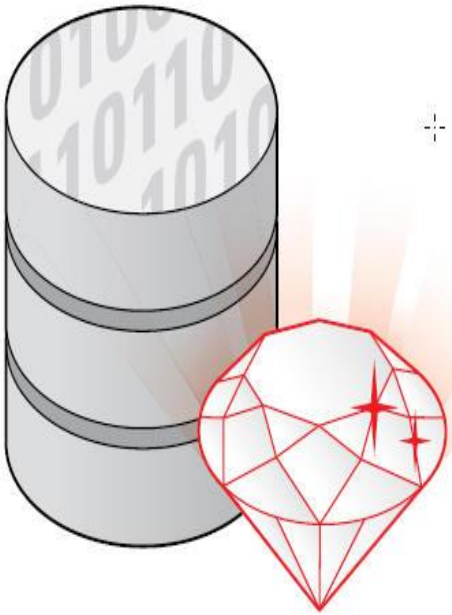

Data Mining | Course Info.

- Course Description
- Instructor Details
- Course Objectives
- Learning Outcomes
- Assessment & Policies

Synopsis

This course will introduce the students to the basic concepts of data mining and examine methods that have emerged from both fields of statistics and artificial intelligence. The course will survey data mining applications, techniques and models proven to be of value in recognizing patterns and making predictions from a domain perspective. Topics include decision trees, classification, association, partitioning, clustering, and text mining. The course will provide hands-on experimentation of data mining algorithms using easy-to-use software and online repositories.

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Instructor

instructor	Office Hours/ Location	Email	Teaching Assistants
Dr. Salha M. Alzahrani	Mon. 11am-2pm Tues. 8am-12pm Building 10, Ground Floor	s.zahrani@tu.edu.sa	A. Reem Altowairgi
Course Format	Lecture Time/Venue	Course Website	
Lectures: 28/Section **Lab: 28/Section**	Face-to-Face: Wed. 9am-11am Online --	Lms.tu.edu.sa	

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Objectives

CO1	Introduce the basic concepts and techniques of data mining.
CO2	Develop skills of using recent data mining software for solving practical problems.
CO3	Gain experience of doing independent study and research.

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Learning Outcomes

CLO1	Describe the basic concepts and techniques of data mining.
CLO2	Perform the basic data processing in data mining .
CLO3-6	Understand classification and clustering algorithms.
CLO7	Understand basic techniques behind text mining.
CLO8	Identify appropriate data mining technique in solving a domain's problem.
CLO9	Identify strengths and limitations of popular data mining techniques and promising business applications.

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Assessment

Method	%	Date
Quiz(zes)	10	Week6, Week12
Lab	20	2hrs/week
Assignment(s)/ Project(s)	10	As planned in the course schedule
MidTerm(s)	20	TBA
Final Exam	40	TBA

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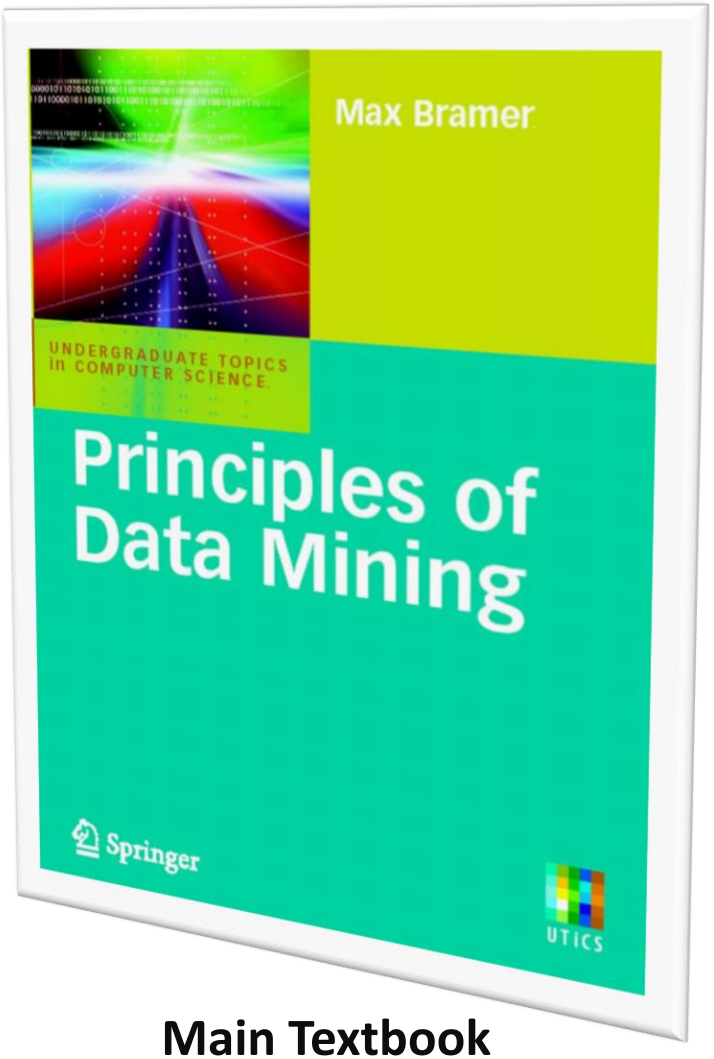
Policies

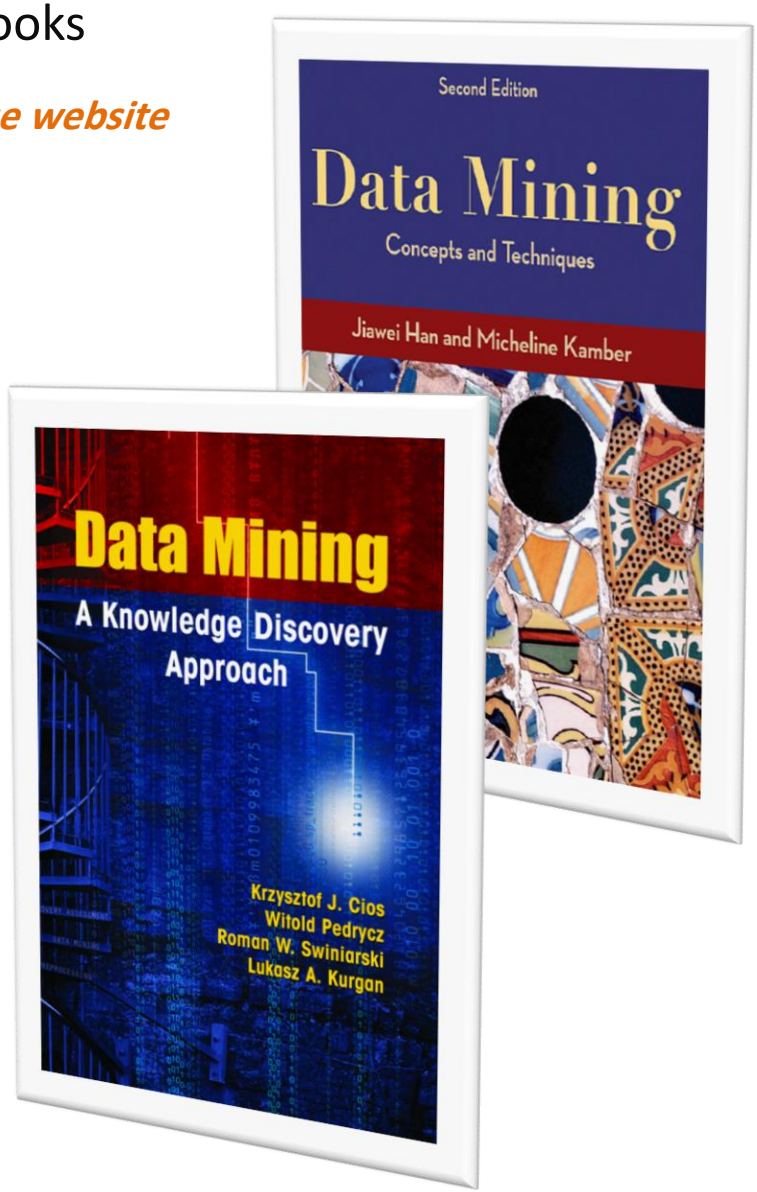
Attendance	it is compulsory for students to attend at least 75% of the whole time allocated to the course. More than four (4) unjustified absences will make you ineligible for the course.
Quizzes	students are informed about the date of their quizzes. Check the above course schedule to see when a quiz is due.
Assignments	students are expected to submit their assignments in a timely manner.
Late Submissions	late submission may be subjected to a decrease in the grade that is proportional to the delayed days.
Mid-terms and Finals	exams are closed books. Students who did not attend the mid-term due to exceptional situations (e.g., medical emergency) will see their mid-term result calculated from their final. 0.75 * Final exam mark will be used as their mid-term result.
Plagiarism	student caught cheating will be awarded a 0 in the exam and may be subject to university disciplinary actions.
Disability	students with disability need to approach the course instructor so that commodities will be put in place to assist them.

Data Mining Course | Textbooks

All books can be downloaded in PDF format from the course website



Main Textbook



Other References

Data Mining Course | Word Cloud.

Data Mining Course | Word Cloud

Data Mining Course | Academic Vocabulary

- **Brush up your English!**
- **Examples of Academic Vocabulary:**

1. abbreviate *2. abstract*
3. according *4. acronym*
5. address *6. affect*
7. alter *8. always*
9. analogy *10. analysis*
11. analyze *12. annotate*
13. anticipate *14. application*
15. apply *16. approach*
17. appropriate *18. approximate*
…etc.

- **A list of academic vocabulary can be found on the Web (or you may download from the course website).**

Data Mining Course | Glossary & Notation

- **Become familiar with the course terminologies!**
- **Example from the book glossary:**

  D

  Data Mining: *The central data processing stage of* ***Knowledge Discovery****.*

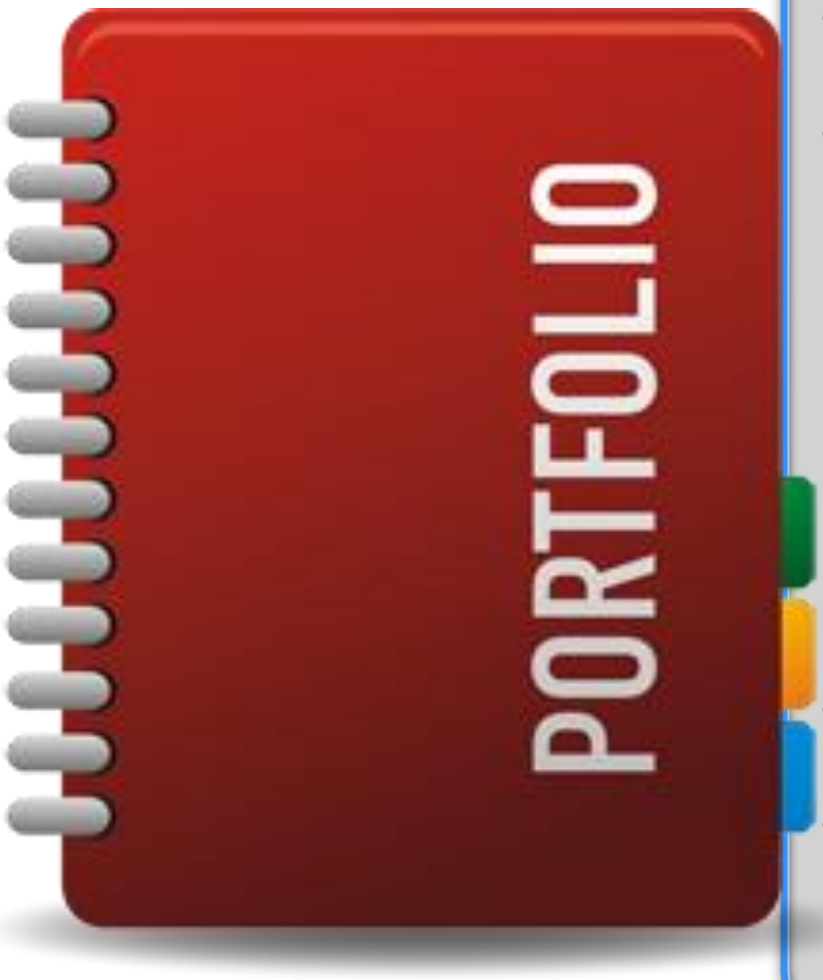
  Dataset: *The complete set of data available for an application. Datasets are divided into* ***instances*** *or* ***records****. …*

  Decision Rule: *Another term for* ***classification rule***

  Decision Tree: *Another name for a* ***classification tree***

- **A list of glossary and notation can be found in Appendix D from the main textbook (or you may download the list separately from the course website).**

Neural Networks Course | Student Portfolio



- **Each student should prepare her own course portfolio!**
- **Portfolios should include the following parts:**
  1) *Course Syllabus*
  2) *Lecture notes (slides)*
  3) *Assignments*
  4) *Quizzes*
  5) *Mid-term exam and answer sheet.*
  6) *Research articles and other supporting materials.*
  7) *Lab lecture notes, exercises, and MATLAB codes.*
- **Portfolios will be checked regularly by the instructor.**
- **Students who prepare good course portfolios may be given a BONUS +2/+5 on their examinations, if needed.**

Next Lecture…

- *Be ready!*
- *Prepare your glossary and academic vocabulary list.*
- *Download & print the lecture notes before your class.*

Thank You !

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