



COMP8230

Mining Unstructured Data

Session 1, Weekday attendance, North Ryde 2020

Department of Computing

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General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

COMP6200 or ITEC657

Corequisites

Co-badged status

Unit description

The aim of this unit is to show where data warehouse and business intelligence technologies are at in this point in time so that business managers know what is possible for their next business strategy. As such this unit is primarily concerned with developing an awareness of what these technologies are currently capable of, rather than creating business intelligence developers. The unit will follow a typical lifecycle of a data warehouse/business intelligence project, involving the following broad phases: extraction transformation and loading data from source systems; building OLAP cubes - once the preserve of elite analysts, OLAP is quickly becoming a ubiquitous technology; data mining - once the preserve of the Fortune 100 companies, it is now a commodity technology available to all; and creating business intelligence tools.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Demonstrate an understanding of basic concepts, techniques, algorithms and modellings in unstructured data mining.

ULO2: Identify the appropriate data mining techniques and algorithms for real life unstructured data mining problems.

ULO3: Explain how good decision making is supported by descriptive and predictive data mining

ULO4: Present and analyse the unstructured data mining results with advanced data mining techniques.

ULO5: Communicate clearly and effectively

Assessment Tasks

Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult [iLearn](#) for revised unit information.

[Find out more about the Coronavirus \(COVID-19\) and potential impacts on staff and students](#)

General Assessment Information

Details for each assignment will be available via iLearn

You are encouraged to:

- set your personal deadline earlier than the actual one;
- keep backups of all your important files;
- ensure that no-one else picks up your printouts.

Late submission

No extensions will be granted without an approved application for Special Consideration. There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late. For example, 25 hours late in

submission for an assignment worth 10 marks – 20% penalty or 2 marks deducted from the total. No submission will be accepted after the solutions have been posted.

Delivery and Resources

Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

Classes

Each week has two hours of lectures. Students need to attend and participate in at least 10 lectures in order to get full marks for class participation. For details of days, times and rooms consult the [timetables webpage](#).

Note there is no workshop/practical for the class.

Required and Recommended Texts

All required and recommended readings will be provided as part of the lecture material.

Unit Web Page

The unit web page will be hosted in iLearn, where you will need to log in using your Student One ID and password. The unit will make extensive use of discussion boards also hosted in iLearn. Please post questions there, they will be monitored by the staff on the unit.

Unit Schedule

Coronavirus (COVID-19) Update

The unit schedule/topics and any references to on-campus delivery below may no longer be relevant due to COVID-19. Please consult [iLearn](#) for latest details, and check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

| Week | Topic | Teaching Staff |
|--|--|----------------|
| Big Data Curation: Turning Raw Data into Contextualise Data and Knowledge | | |
| Week 1 | Survey Data Curation from Cleaning to Adding Value | Amin Beheshti |
| Week 2 | Cleaning | Amin Beheshti |
| Week 3 | Contextualizing | Amin Beheshti |
| Week 4 | Analyzing | Amin Beheshti |
| Efficiently and Effectively Mining Contextual Networking Data | | |

| Week | Topic | Teaching Staff |
|--|--|------------------|
| Week 5 | Context-Aware Trust Relation Mining in Social Networks | Guanfeng Liu |
| Week 6 | Context-Aware Path Mining in Networking Data | Guanfeng Liu |
| Week 7 | Graph Pattern Matching in Large-Scale Networking Data | Guanfeng Liu |
| Week 8 | Social Network-Based Community Mining | Guanfeng Liu |
| “Making Sense” Out of Unstructured Data Using Semantic Web Technologies | | |
| Week 9 | Making Sense out of Unstructured Data | Rolf Schwitter |
| Week 10 | Validating RDF Graphs | Rolf Schwitter |
| Week 11 | Ontology Engineering | Rolf Schwitter |
| Week 12 | RuleML and Rule Languages | Rolf Schwitter |
| Week 13 | The Applications of Mining Unstructured Data (Industry Talk) | Invited Speakers |

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway \(https://students.mq.edu.au/support/study/student-policy-gateway\)](https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit <ask.mq.edu.au> or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (<mq.edu.au/learningskills>) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at <ask.mq.edu.au>

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#).

The policy applies to all who connect to the MQ network including students.