BUSO8090

Data and Visualisation for Business

Term 2, Online-scheduled-weekday 2024

Department of Actuarial Studies and Business Analytics

Contents

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General Information

Unit convenor and teaching staff Geng Sun geng.sun@mq.edu.au
Credit points 10
Prerequisites Admission to GradCertAppBusAnalytics
Corequisites
Co-badged status
Unit description This unit prepares students for the world where "data is the new oil". Numerous business case studies are treated in depth so students emerge with a clear understanding of the "unreasonable effectiveness of data".The journey starts with the Linux command line. Along the way students will develop the skills necessary to tease data out of relational databases using SQL. Data visualisation is also a focus of the unit, which treats its analysis and design as well as its implementation using a variety of open source and commercial 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: Devise programming language code for data analytics and visualisation using a variety of computer tools.

ULO2: Formulate SQL language approaches to relational database problems.

ULO3: Assemble statistical learning techniques to tackle data science problems.

ULO4: Examine and employ a variety of data visualisation techniques.

ULO5: Evaluate various popular data visualisation solutions.

General Assessment Information

In Assessment 1 you will design and develop a database for a real-world business scenario. You

will wirte a report to address the business concerns and provide business insights using the databse you created.

In Assessment 2 you will clean and visualise data from a dataset provided, and report your findings along with business recommendations in a report.

In Assessment 3 you will carry out a case study based on the business story of a world-class company, Kodak.

Assessment Tasks

Name	Weighting	Hurdle	Due
Project	40%	No	Friday of Week10
Assignment 1	30%	No	Friday of Week7
Assignment 2	30%	No	Friday of Week9

Project

Assessment Type [1]: Project
Indicative Time on Task [2]: 20 hours
Due: **Friday of Week10**
Weighting: **40%**

Students will work on a project.

On successful completion you will be able to:
- Assemble statistical learning techniques to tackle data science problems.
- Examine and employ a variety of data visualisation techniques.
- Evaluate various popular data visualisation solutions.

Assignment 1

Assessment Type [1]: Programming Task
Indicative Time on Task [2]: 20 hours
Due: **Friday of Week7**
Weighting: **30%**

Practical coding assignment using SQL.

On successful completion you will be able to:

- Devise programming language code for data analytics and visualisation using a variety of computer tools.
- Formulate SQL language approaches to relational database problems.

Assignment 2

Assessment Type [1]: Modelling task
Indicative Time on Task [2]: 20 hours
Due: **Friday of Week9**
Weighting: **30%**

Practical coding assignment using data visualisation packages.

On successful completion you will be able to:

- Devise programming language code for data analytics and visualisation using a variety of computer tools.
- Assemble statistical learning techniques to tackle data science problems.
- Examine and employ a variety of data visualisation techniques.
- Evaluate various popular data visualisation solutions.

[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Siminar will be held online weekly.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). 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
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

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

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/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

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

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

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE

- Upload an assignment to Studiosity
- Complete the 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

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues
- Student Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

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.

Unit information based on version 2024.05 of the Handbook