STAT8225

Data Science Project

Session 2, Special circumstance 2020

Department of Mathematics and Statistics

Contents

Notice

As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and ot her small group learning activities on campus for the second half-year, while keeping an online ver sion available for those students unable to return or those who choose to continue their studies onli ne.

To check the availability of face-to-face and onlin e activities for your unit, please go to timetable vi ewer. To check detailed information on unit asses sments visit your unit's iLearn space or consult yo ur unit convenor.

General Information

Unit convenor and teaching staff
Lead Convenor
Georgy Sofronov
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Contact via Email
12WW 703
please refer to iLearn

Second Convenor
Nan Zou
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Contact via Email
12WW 706
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Credit points
20

Prerequisites
(Admission to MDataSc and (40cp from (COMP8200-COMP8250 and STAT8000-STAT8999)) or (80cp in STAT or ITEC units at 8000 level))

Corequisites

Co-badged status

Unit description
This unit draws together learning in previous units into a practice-based, workplace relevant project. Students will carry out a major data analysis project making use of real world data to provide insight into significant problems. Problems may be suggested by students, by employers or industry partners or by academic staff. All projects will involve analysis of large data sets using the techniques learned in the earlier units in the program. Students will present results in a professional manner and will manage source code and data in a way that enables and encourages reproduction of the analysis by others. The project requires an equal focus on process and the product, requiring the use of quality control and assurance methods, tools and techniques.

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: Apply research methods in planning and carrying out a significant data science analysis project.
ULO2: Identify ethical issues as they arise in professional data science work and adhere to professional ethical standards when undertaking all aspects of this work
ULO3: Apply appropriate data science methods in the analysis of a real world problem.
ULO4: Communicate methods used and results obtained in a clear and concise manner suitable for a client audience.
ULO5: Demonstrate best practice in data and code management to support reproducibility of results.

General Assessment Information

ASSIGNMENT SUBMISSION: Assignment submission will be online through the iLearn page.

Submit assignments online via the appropriate assignment link on the iLearn page. A personalised cover sheet is not required with online submissions. Read the submission statement carefully before accepting it as there are substantial penalties for making a false declaration.

- Assignment submission is via iLearn. You should upload this as a single scanned PDF file.
- Please note the quick guide on how to upload your assignments provided on the iLearn page.
- Please make sure that each page in your uploaded assignment corresponds to only one A4 page (do not upload an A3 page worth of content as an A4 page in landscape). If you are using an app like Clear Scanner, please make sure that the photos you are using are clear and shadow-free.
- It is your responsibility to make sure your assignment submission is legible.
- If there are technical obstructions to your submitting online, please email us to let us know.

You may submit as often as required prior to the due date/time. Please note that each submission will completely replace any previous submissions. It is in your interests to make frequent submissions of your partially completed work as insurance against technical or other problems near the submission deadline.

LATE SUBMISSION OF WORK: All assessment tasks must be submitted by the official due date and time. In the case of a late submission for a non-timed assessment (e.g. an assignment), if special consideration has NOT been granted, 20% of the earned mark will be deducted for

each 24-hour period (or part thereof) that the submission is late for the first 2 days (including weekends and/or public holidays). For example, if an assignment is submitted 25 hours late, its mark will attract a penalty equal to 40% of the earned mark. After 2 days (including weekends and public holidays) a mark of 0% will be awarded. Timed assessment tasks (e.g. tests, examinations) do not fall under these rules.

Assessment Tasks

Name	Weighting	Hurdle	Due
Project Proposal	10%	No	Week 4
Literature Review	20%	No	Week 7
Presentation	10%	No	Week 11
Project Report	60%	No	Week 13

Project Proposal

Assessment Type [1]: Plan
Indicative Time on Task [2]: 27 hours
Due: **Week 4**
Weighting: **10%**

2500 words abstract or equivalent

On successful completion you will be able to:

- Apply research methods in planning and carrying out a significant data science analysis project.

Literature Review

Assessment Type [1]: Literature review
Indicative Time on Task [2]: 55 hours
Due: **Week 7**
Weighting: **20%**

2500 words literature review or equivalent

On successful completion you will be able to:

- Apply research methods in planning and carrying out a significant data science analysis project.
- Identify ethical issues as they arise in professional data science work and adhere to professional ethical standards when undertaking all aspects of this work
- Apply appropriate data science methods in the analysis of a real world problem.

Presentation

Assessment Type [1]: Presentation
Indicative Time on Task [2]: 27 hours
Due: **Week 11**
Weighting: **10%**

Each member of a group will present a 5-minute presentation on a particular aspect of the project.

On successful completion you will be able to:

- Communicate methods used and results obtained in a clear and concise manner suitable for a client audience.

Project Report

Assessment Type [1]: Report
Indicative Time on Task [2]: 165 hours
Due: **Week 13**
Weighting: **60%**

15000 words essay or equivalent

On successful completion you will be able to:

- Apply research methods in planning and carrying out a significant data science analysis project.
- Identify ethical issues as they arise in professional data science work and adhere to professional ethical standards when undertaking all aspects of this work
- Apply appropriate data science methods in the analysis of a real world problem.
- Communicate methods used and results obtained in a clear and concise manner suitable for a client audience.

- Demonstrate best practice in data and code management to support reproducibility of results.

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[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

This unit is a Master of Data Science Project.

Project proposal, literature review, presentation and project report have to be submitted via iLearn.

Literature review and presentation are individual tasks while project proposal and project report are group assessments where individual contribution is assessed by peer assessment (for example, a student was responsible for simulation study or data cleaning etc).

The schedule of presentations will be published on iLearn.

Weekly consultations will be organised via Zoom.

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). 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). 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).

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.