UNSW SCIENCE

School of Maths and Statistics

Course outline

DATA3001

Data Science and Decisions

Term 3, 2022

Cricos Provider Code: 00098G

Staff

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Please refer to your Timetable on MyUNSW for your Lecture Tut, Lab enrolment days and times.
Timetable weblink: https://timetable.unsw.edu.au/2022/DATA3001.html

Administrative Contacts

Please visit the School of Mathematics and Statistics website for a range of information on School Policies, Forms and Help for Students.

For information on Courses, please go to “Student Life & resources page” and either Undergraduate Courses and/or Postgraduate Courses for information on all course offerings.

The “Student Notice Board” can be located by going to the “Student Life & resources” page; Notices are posted regularly for your information here. Please familiarise yourself with the information found in these locations. The School web page is: https://www.maths.unsw.edu.au

If you cannot find the answer to your queries on the web you are welcome to contact the Student Services Office directly.

By email ug.mathsstats@unsw.edu.au
By phone: 9385 7053

Should we need to contact you, we will use your official UNSW email address of in the first instance*. It is your responsibility to regularly check your university email account. Please state your student number in all emails.*

Course Information

Pre-Requisite: Enrolment in 3959 Data Science program. This course was designed to be taken in the ***last year*** of the program.

Course Aims

To apply techniques, you have learnt in your degree to an industry problem, in a team environment, and present them to your client.

Course Description

This is the capstone course for the Data Science and Decisions program. The course will bring students in the three streams together to share their knowledge, expertise and training in a way that is typical of industry. Students will attend seminars by industry representatives from Data Science industries, and students will work on group projects related to real world industry problems. Typical groups will be composed of students across the three different streams of the Data Science and Decisions program. The course will expose students to Data Science as it is practiced in industry.

Assumed knowledge: students are assumed to have completed all level I and level II courses in the 3959 program before enrolling in this course.

Assessment and Deadlines

Assessment	Week	Weighting %	Due date if applicable
Project Proposal	4	10%	Wed 10AM (AEDT)
Draft Group Report	8	6%	Wed 10AM (AEDT)
Peer Review of Drafts	9	4%	Wed 10AM (AEDT)
Group Presentation	10	30%	Wed 10AM (AEDT)
Group Report	11	50%	Wed 10AM (AEDT)

All the above times are in Australian Eastern Daylight Time (Sydney).

Project Proposal

Project proposals should be submitted as pdf documents on Moodle, prior to the start of the week 4 Wednesday class, by 10 AM. These should include proposed workload allocations for every team member. Details can be found on Moodle, with a template.

Draft Report

Producing a project report is a major undertaking, and is the primary tool used for assessment in this course. As such early feedback on a draft proposal is an important step. Draft reports should be submitted as pdf documents on Moodle, by 10 AM on the Wednesday of Week 8, one report should be submitted per group. These are drafts, and need not be perfect, but should give an indication of the main (expected) results and the planned structure of the final report.

Peer Review of Drafts

Peer review gives you an opportunity to gain a broader perspective by: gaining feedback from others who have not previously been working on your problem; looking in detail at a project other students have been doing working. Each group will be required to review two draft projects

produced by groups working under a different project theme and respond with at least one positive comment on the work and at least one suggestion for how it can be improved (one mark each). Only two peer reviews should be submitted on behalf of each group.

Group Presentation

Group presentations should be pre-recorded and shared with their supervisor on their project Team channel prior to the week 10 Wednesday class, by 10 AM. Presentations should be no more than 12 minutes long and should involve each group member. Each group member should be visible at some point in the presentation, as should a picture of their UNSW student ID card. Talks will be presented at dedicated times throughout regular Week 10 classes, in two parallel streams, and all group members should be present immediately after their presentation to answer questions.

Students will be asked to peer review all talks in one of the parallel streams for the session in which they are not themselves presenting. Supervisor and student marks will be aggregated to produce the final mark, after adjusting for differences in scaling across markers.

Group Report

Final group reports should be submitted as pdf documents on Moodle, by 10 AM on the Wednesday of Week 11. One final report should be submitted per group. Details can be found on Moodle, with a template.

Individual workload reports should be submitted, by every student in the team, also by 10 AM Wednesday, Week 11. These reports should be submitted as responses to a set questionnaire available on Moodle, which ask for the relative contribution of each student to each component of the project. It is not expected that all students will contribute equally at all stages (on the contrary, teams usually work more effectively when this is not the case!), but all students are expected to make a significant contribution. Individuals from a group may receive different group report marks if this is not the case.

Late Submission of Assessment Tasks

A late penalty of 5% of the maximum mark for the task will be applied per day or part day any assessment task is submitted more than 1 hour late. (Where "late" in this context means after any extensions granted for Special Consideration or Equitable Learning Provisions.) For example, an assessment task that was awarded 75% would be given 65% if it was 1-2 days late. Any assessment task submitted 7 or more days late will be given zero.

Course Schedule

The course will include material taken from some of the following topics. This is should only serve as a guide as it is not an extensive list of the material to be covered and the timings are approximate. The course content is ultimately defined by the material covered in lectures.

Weeks	Topic
0	Watch project theme videos, select a project theme to work on and group. Sign confidentiality statement on Moodle
1	Group selection to be finalized, week 1 first class (Wed 10 AM)
4	Project proposal due including proposed individual workload assignment (Wed 10 AM, Moodle)
8	Submit draft report for peer feedback (Wed 10 AM, Moodle)
9	Provide feedback to your assigned groups (Wed 10 AM Moodle)
10	Group presentation during classes
11	Group project due, including individual workload reports from each student (Wed 10 AM, Moodle)

There are several project themes available, working on projects for different industry partners. Videos describing the scope of projects available under each theme, and data for completing these tasks, are available on Teams. If possible, please decide what project theme to work on, and sign up to a team, before your first class, so you can get started immediately. There are a pre-allocated number of teams working under each program theme, and a maximum of five students per group. Places will be allocated on a first come, first served basis.

All students using industry data that is not publicly available must sign a confidentiality statement, available on Moodle.

Course Learning Outcomes (CLO)

- CLO1 Students undertaking this program will gain an understanding and appreciation of Data Sciences (and Data Analytics) in the modern world
- CLO2 Student will be able to apply mathematical and computational techniques, and business sensibilities, to real-world problems.
- CLO3 Students will gain skills in teamwork
- CLO4 Students will gain skills in writing technical reports
- CLO5 Students will gain skills in assessing reports
- CLO6 Students will gain skills in oral presentations

Moodle

Log in to Moodle to find announcements, general information, notes, lecture slide, classroom tutorial and assessments etc. - https://moodle.telt.unsw.edu.au

Microsoft Teams

All project communications and meetings will be via Microsoft TEAMS.

The General channel will have announcements at the start of the Wednesday class. Each team will be assigned their own channel where they can discuss their project, share files, and hold private meetings. If you find you do not have access to the DATA3001 Team, request access ASAP.

School and UNSW Policies

The School of Mathematics and Statistics has adopted a number of policies relating to enrolment, attendance, assessment, plagiarism, cheating, special consideration etc. These are in addition to the Policies of The University of New South Wales. Individual courses may also adopt other policies in addition to or replacing some of the School ones. These will be clearly notified in the Course Initial Handout and on the Course Home Pages on the Maths Stats web site.

Students in courses run by the School of Mathematics and Statistics should be aware of the School and Course policies by reading the appropriate pages on the Maths Stats web site starting at:

https://www.maths.unsw.edu.au/currentstudents/assessment-policies

The School of Mathematics and Statistics will assume that all its students have read and understood the School policies on the above pages and any individual course policies on the Course Handout and Course Home Page. Lack of knowledge about a policy will not be an excuse for failing to follow the procedure in it.

Academic Integrity and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

The **UNSW Student Code** provides a framework for the standard of conduct expected of UNSW students with respect to their academic integrity and behaviour. It outlines the primary obligations of students and directs staff and students to the Code and related procedures.

In addition, it is important that students understand that it is not permissible to buy essay/writing services from third parties as the use of such services constitutes plagiarism because it involves using the words or ideas of others and passing them off as your own. Nor is it permissible to sell copies of lecture or tutorial notes as students do not own the rights to this intellectual property.

If a student breaches the Student Code with respect to academic integrity, the University may take disciplinary action under the **Student Misconduct Procedure**.

The UNSW Student Code and the Student Misconduct Procedure can be found at:
https://student.unsw.edu.au/plagiarism

An online Module "Working with Academic Integrity" (https://student.unsw.edu.au/aim) is a six-lesson interactive self-paced Moodle module exploring and explaining all of these terms and placing them into your learning context. It will be the best one-hour investment you've ever made.

Plagiarism

Plagiarism is presenting another person's work or ideas as your own. Plagiarism is a serious breach of ethics at UNSW and is not taken lightly. So how do you avoid it? A one-minute video for an overview of how you can avoid plagiarism can be found https://student.unsw.edu.au/plagiarism.

Additional Support

ELISE (Enabling Library and Information Skills for Everyone)

ELISE is designed to introduce new students to studying at UNSW.

Completing the ELISE tutorial and quiz will enable you to:

- analyse topics, plan responses and organise research for academic writing and other assessment tasks
- effectively and efficiently find appropriate information sources and evaluate relevance to your needs
- use and manage information effectively to accomplish a specific purpose
- better manage your time
- understand your rights and responsibilities as a student at UNSW
- be aware of plagiarism, copyright, UNSW Student Code of Conduct and Acceptable Use of UNSW ICT Resources Policy
- be aware of the standards of behaviour expected of everyone in the UNSW community
- locate services and information about UNSW and UNSW Library

Some of these areas will be familiar to you, others will be new. Gaining a solid understanding of all the related aspects of ELISE will help you make the most of your studies at UNSW.

The *ELISE* training webpages:

https://subjectguides.library.unsw.edu.au/elise/aboutelise

Equitable Learning Services (ELS)

If you suffer from a chronic or ongoing illness that has, or is likely to, put you at a serious disadvantage, then you should contact the Equitable Learning Services (previously known as SEADU) who provide confidential support and advice.

They assist students:

- living with disabilities
- with long- or short-term health concerns and/or mental health issues
- who are primary carers

- from low SES backgrounds
- of diverse genders, sexes and sexualities
- from refugee and refugee-like backgrounds
- from rural and remote backgrounds
- who are the first in their family to undertake a bachelor-level degree.

Their web site is: https://student.unsw.edu.au/els/services

Equitable Learning Services (ELS) may determine that your condition requires special arrangements for assessment tasks. Once the School has been notified of these, we will make every effort to meet the arrangements specified by ELS.

Additionally, if you have suffered significant misadventure that affects your ability to complete the course, please contact your Lecturer-in-charge in the first instance.

Academic Skills Support and the Learning Centre

The Learning Centre offers academic support programs to all students at UNSW Australia. We assist students to develop approaches to learning that will enable them to succeed in their academic study. For further information on these programs please go to:

http://www.lc.unsw.edu.au/services-programs

Applications for Special Consideration for Missed Assessment

Please adhere to the Special Consideration Policy and Procedures provided on the web page below when applying for special consideration.

https://student.unsw.edu.au/special-consideration

Please note that the application is not considered by the Course Authority, it is considered by a centralised team of staff at the Nucleus Student Hub.

The School will contact you (via student email account) after special consideration has been granted to reschedule your missed assessment, for a *lab test or paper-based test* only.

For applications for special consideration for *assignment extensions*, please note that the new submission date and/or outcome will be communicated through the special consideration web site only, no communication will be received from the School.

For Dates on Final Term Exams and Supplementary Exams please check the “Key Dates for Exams” ahead of time to avoid booking holidays or work obligations.

https://student.unsw.edu.au/exam-dates

If you believe your application for Special Consideration has not been processed, you should email specialconsideration@unsw.edu.au immediately for advice.

Course Evaluation and Development (MyExperience)

Student feedback is very important to continual course improvement. This is demonstrated within the School of Mathematics and Statistics by the implementation of the UNSW online student survey *myExperience*, which allows students to evaluate their learning experiences in an anonymous way. The *myExperience* survey reports are produced for each survey. They are released to staff after all student assessment results are finalised and released to students. Course convenor will use the feedback to make ongoing improvements to the course.