



COMP6400

Intelligent Machines, Ethics and Law

Session 1, In person-scheduled-weekday, North Ryde 2023

School of Computing

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General Information

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Credit points

10

Prerequisites

Corequisites

Co-badged status

This unit is co-badged with COMP2400 (face-to-face and online).

Unit description

This unit is co-designed and co-taught by relevant experts in Computing, Philosophy and Law. It introduces modern Artificial Intelligence (AI) technology, and evaluates the capabilities of several intelligent systems on well-known tasks such as facial recognition and the assessment of insurance claims. In the context of these systems, the unit will address fundamental issues of ethics and law that need to be addressed when designing and deploying AI-powered computer applications towards achieving Responsible AI. The implications of the ethical and legal requirements on the use of AI systems will be discussed along with possible technical remedies to address them.

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: Employ existing AI systems on benchmark business problems and evaluate the results.

ULO2: Demonstrate an appreciation of the ethical, legal, and other socioeconomic implications of AI.

ULO3: Outline sustainable remedial measures for proposed AI solutions, aligned with the ethical and legal requirements, in the business context.

ULO4: Effectively communicate to various stakeholders how the potential legal, ethical and social issues are addressed in the context of the solutions developed.

General Assessment Information

This unit is jointly taught by academics from Computing (Weeks 1 to 4), Law (Weeks 5 to 8) and Philosophy (Weeks 9 to 12). Correspondingly there are three quizzes and three assignments. Should there be a need for clarification or help regarding assessment tasks, students should contact corresponding teaching staff. The convenor should be contacted only if the problem does not get resolved.

Requirements to Pass this Unit

To pass this unit you must:

- Achieve a total mark equal to or greater than 50%.

Late submission

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is 11:55 pm. A 1-hour grace period will be provided to students who experience a technical concern. The late submission rule was changed to align with the new Faculty policy.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for [Special Consideration](#).

In this unit, late submissions will be accepted as follows:

- Quiz 1: NO, unless Special Consideration is granted
- Quiz 2: NO, unless Special Consideration is granted
- Quiz 3: NO, unless Special Consideration is granted
- Assignment 1: YES, Standard Late Penalty applies
- Assignment 2: YES, Standard Late Penalty applies
- Assignment 3 – YES, Standard Late Penalty applies

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Online Quiz (1, 2 & 3)</u>	15%	No	Weeks 3, 7 and 11
<u>Assignment 1</u>	25%	No	Week 4
<u>Assignment 2</u>	25%	No	Week 8
<u>Assignment 3</u>	35%	No	Week 12

Online Quiz (1, 2 & 3)

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 3 hours

Due: **Weeks 3, 7 and 11**

Weighting: **15%**

Three online quizzes, one associated with each assignment. A quiz is given before each of the three assignments, aimed at supporting student knowledge required for that assignment.

On successful completion you will be able to:

- Employ existing AI systems on benchmark business problems and evaluate the results.
- Demonstrate an appreciation of the ethical, legal, and other socioeconomic implications of AI.
- Outline sustainable remedial measures for proposed AI solutions, aligned with the ethical and legal requirements, in the business context.
- Effectively communicate to various stakeholders how the potential legal, ethical and social issues are addressed in the context of the solutions developed.

Assignment 1

Assessment Type ¹: Programming Task

Indicative Time on Task ²: 25 hours

Due: **Week 4**

Weighting: **25%**

Students will run pre-trained AI systems on well-known problems of interest to business, and present the results of their experiments and evaluations.

On successful completion you will be able to:

- Employ existing AI systems on benchmark business problems and evaluate the results.

Assignment 2

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 25 hours

Due: **Week 8**

Weighting: **25%**

Detail analysis of the legal issues raised by the AI systems used in Assignment 1, and development of a proposed, sustainable remedy.

On successful completion you will be able to:

- Demonstrate an appreciation of the ethical, legal, and other socioeconomic implications of AI.
- Outline sustainable remedial measures for proposed AI solutions, aligned with the ethical and legal requirements, in the business context.
- Effectively communicate to various stakeholders how the potential legal, ethical and social issues are addressed in the context of the solutions developed.

Assignment 3

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 30 hours

Due: **Week 12**

Weighting: **35%**

Detail analysis of the ethical/social issues raised by the AI systems used in Assignment 1 and 2, and development of a proposed, sustainable remedy addressing those issues.

On successful completion you will be able to:

- Demonstrate an appreciation of the ethical, legal, and other socioeconomic implications of AI.
- Outline sustainable remedial measures for proposed AI solutions, aligned with the ethical and legal requirements, in the business context.
- Effectively communicate to various stakeholders how the potential legal, ethical and social issues are addressed in the context of the solutions developed.

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 being offered in both Face-to-Face and Online format. It is also co-badged with COMP6400, a PG unit. Apart from lectures, there are practical classes (associated with the computing related lectures) and SGTAs throughout the semester. Please consult the university timetable for venue and time.

There is no text book for the unit. Necessary resources will be provided by the teaching team on the iLearn page.

Unit Schedule

This unit has three modules:

1. Computational aspects of AI (Weeks 1-4, Abhaya Nayak, Computing)
2. Legal aspects of AI (Weeks 5-8, Niloufer Selvadurai and Rita Matulyonite, Law); and
3. Ethical aspects of AI (Weeks 9-12, Oisin Deery, Philosophy).

Week 13 is reserved for unit revision.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policie) (<https://policie>

[s.mq.edu.au](https://www.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 \(https://students.mq.edu.au/support/study/policies\)](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 \(https://policies.mq.edu.au\)](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.