UAB
Universitat Autònoma de Barcelona

Applications and Challenges of AI I

Code: 106595
ECTS Credits: 6

2024/2025

Degree	Type	Year
2504392 Artificial Intelligence	OB	4

Contact

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Teachers

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Teaching groups languages

You can view this information at the end of this
document.

Prerequisites

Not defined

Objectives and Contextualisation

This subject aims to provide the student with a broad vision of the main challenges and applications of artificial
intelligence in different fields of application

Competences

- Act within the field of knowledge by evaluating sex/gender inequalities.
- Analyse and solve problems effectively, generating innovative and creative proposals to achieve
  objectives.

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- Communicate effectively, both orally and in writing, adequately using the necessary communicative resources and adapting to the characteristics of the situation and the audience.
- Identify, analyse and evaluate the ethical and social impact, the human and cultural context, and the legal implications of the development of artificial intelligence and data manipulation applications in different fields.
- Know and apply the innovation, technology transfer and citizen participation processes in the field of artificial intelligence.
- Work cooperatively to achieve common objectives, assuming own responsibility and respecting the role of the different members of the team.
- Work independently, with responsibility and initiative, planning and managing time and available resources, and adapting to unforeseen situations.

Learning Outcomes

1. Analyse and solve problems effectively, generating innovative and creative proposals to achieve objectives.
2. Analyse sex/gender inequalities and gender bias in the field of knowledge.
3. Communicate effectively, both orally and in writing, adequately using the necessary communicative resources and adapting to the characteristics of the situation and the audience.
4. Communicate in a non-sexist and non-discriminatory way.
5. Evaluate how stereotypes and gender roles affect the professional exercise.
6. Identify opportunities for innovation and knowledge transfer when AI is applied to different sectors and fields.
7. Identify the needs and opportunities for applying AI to different sectors and fields.
8. Propose projects and actions that incorporate the gender perspective.
9. Work cooperatively to achieve common objectives, assuming own responsibility and respecting the role of the different members of the team.
10. Work independently, with responsibility and initiative, planning and managing time and available resources, and adapting to unforeseen situations.

Content

- AI and communications
- AI and social challenges
- AI and accessible communication
- AI in health
- AI and social institutions
- AI and businesse management

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theory classes	12	0.48	6, 7
Type: Supervised			
Project follow-up	10	0.4	1, 3, 6, 7, 9
Type: Autonomous			

Work in the project	114	4.56	1, 2, 3, 4, 5, 6, 7, 8, 9

The course will be organized around the development of a practical project based on a real use case of AI in some of the areas of application that will be worked on in the subject. At the beginning of the subject, the challenges, opportunities and potential problems of the application of AI in each of the areas will be introduced. Based on this introduction, several use cases will be defined and the students will work in small groups of 4-6 members to analyze the use case and propose alternative solutions.
Class activities will be organized in two types of sessions:
- Follow-up sessions of project development work based on the use case.
- Theoretical sessions in which we will introduce the challenges and opportunities in each field of application.
Students will have to extend the work done in the class sessions with their own work at home in order to complete the project. The main body of work necessary for the development of the project will have to be done independently, apart from class hours.

All the subject information and related documents that students need will be available on the virtual campus (cv.uab.cat).

Note: 15 minutes of a class will be set aside, within the calendar established by the center/degree, for students to fill in the teacher performance and subject evaluation surveys /module.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Oral presentation	20%	2	0.08	3, 4, 8
Project follow-up	20%	2	0.08	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Written report	20%	10	0.4	1, 2, 3, 4, 5, 6, 7

The project grade is calculated by weighting the evidence collected in each of the following activities:
- Follow-upsessions (20%): some class sessions will be held to monitor and evaluate the progress of the work done by the students.

- Written report (20%): students will have to prepare a final report describing the analysis of the use case and the proposed solution.

- Oral presentation (20%): students will have to make a final oral presentation outlining the work done during the course.

- Quality of the implemented solution (40%): this evidence will correspond to the assessment of the quality of the analysis and discussion of the use case and of the proposed solution alternatives.

In the assessment of this evidence there will be a group grade, but also an individual grade depending on the contribution of each student observed in the follow-up sessions and oral presentations.

If the minimum grade does not reach 5, there will be the possibility of recovery by submitting a new improved

version of the report and the proposed solution. There will be no option to recover the grade of the oral presentation and follow-up sessions

Bibliography

Not defined

Software

No specific software is needed

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	1	English	first semester	afternoon
(TE) Theory	1	English	first semester	afternoon