Social and Ethical Issues of Big Data & AI

Academic Year: (2023 / 2024) **Review date: 11/01/2024 17:24:44**

Department assigned to the subject: Computer Science and Engineering Department, Social Sciences Department

Coordinating teacher: GENOVA FUSTER, GONZALO

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 2

OBJECTIVES

- Ability to understand and identify the new challenges faced by the Social Sciences in the digital world.
- Ability to understand and analyze individual and collective aspects of human behavior in the digital world.
- Ability to understand and analyze the emerging social mechanisms in a hyperconnected and globalized world.
- Ability to understand and analyze the consequences of technology on social relations.
- Knowledge of good practices in ethical data management.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to data and algorithms ethics.
2. AI ethics and the European GDPR initiative and data strategy.
3. Alignment issues.
4. Data, bias and discrimination, transparency and explainability.
5. Practical session on biases, transparency and explainability.
6. Innovation and fundamental rights in the AI act of the EU and the rest of the world.
7. Copyright and current problems of generative AI.

LEARNING ACTIVITIES AND METHODOLOGY

Training Activities:

- Theoretical classes
- Theoretical-practical classes
- Tutorials
- Group work
- Individual student work

Teaching Methods:

- Presentations in the professor's lecture room with computer and audiovisual support, in which the main concepts of the subject are developed and a bibliography is provided to complement the students' learning.
- Critical reading of texts recommended by the subject professor: Press articles, reports, manuals and/or academic articles, either for later discussion in class, or to expand and consolidate knowledge of the subject.
- Resolution of practical cases, problems, etc. raised by the professor, either individually or in a group.
- Presentation and discussion in class, under the moderation of the professor, of topics related to the content of the subject, as well as practical case studies.
- Developing pieces of work and reports, individually or in group.
- Seminars/lectures by national and international experts, in face-to-face or remote synchronous sessions.

Training Activities:

- Theoretical classes
- Theoretical-practical classes
- Tutorials
- Group work
- Individual student work

Teaching Methods:

- Presentations in the professor's lecture room with computer and audiovisual support, in which the main concepts of the subject are developed and a bibliography is provided to complement the students' learning.
- Critical reading of texts recommended by the subject professor: Press articles, reports, manuals and/or academic articles, either for later discussion in class, or to expand and consolidate knowledge of the subject.
- Resolution of practical cases, problems, etc. raised by the professor, either individually or in a group.
- Presentation and discussion in class, under the moderation of the professor, of topics related to the content of the subject, as well as practical case studies.
- Developing pieces of work and reports, individually or in group.
- Seminars/lectures by national and international experts, in face-to-face or remote synchronous sessions.

ASSESSMENT SYSTEM

% end-of-term-examination/test:	0
% of continuous assessment (assigments, laboratory, practicals…):	100

- Participation in class and in the course blog (30%)
- Team work done during the course (30%)
- Individual final essay (40%)

In the extraordinary call, the evaluation system will be as follows:
- Exam: 100%

BASIC BIBLIOGRAPHY

- Broussard, Meredith Artificial Unintelligence: How Computers Misunderstand the World, The MIT Press, 2018

- Collman, Jeff, Sorin Adam Matei (eds.) Ethical Reasoning in Big Data: an exploratory analysis, Springer, 2013

- Peirano, Marta The enemy knows the system, Madrid: Debate, 2019

- Uwe Engel, Anabel Quan-Haase, Sunny Xun Liu, Lars E Lyberg (eds.) Handbook of Computational Social Science, Volume 1. Theory, Case Studies and Ethics, Routledge, 2021

- Véliz, Carissa Privacy is Power: Why and How You Should Take Back Control of Your Data, London: Bantam Press, 2020

- Zuboff, Shoshana The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power, New York: Public Affairs, 2019

BASIC ELECTRONIC RESOURCES

- Online Ethics Center for Engineering and Science . Big Data in the Life Sciences: Bibliography, Social and Behavioral Sciences: https://onlineethics.org/cases/big-data-life-sciences-collection/big-data-life-sciences-bibliography-social-and-behavioral