UNIVERSITÀ DI PISA

SOCIAL AND ETHICAL ISSUES IN INFORMATION TECHNOLOGY

CATERINA FLICK

Academic year	2022/23
Course	INFORMATICA
Code	659AA
Credits	6

Modules	Area	Type	Hours	Teacher(s)
SOCIAL AND ETHICAL ISSUES IN INFORMATION TECHNOLOGY	INF/01	LEZIONI	48	CATERINA FLICK

Obiettivi di apprendimento

Conoscenze
The course aims to provide a thorough overview of the many ethical and social issues raised by computer technology, with particular attention to Artificial Intelligence and its multifarious impact on society and human existence. Students will learn about the most compelling social and ethical challenges posed by information technologies and how to approach them in a rigorous and critical fashion. Conceptual analysis will be supported by discussion of practical case studies.

Modalità di verifica delle conoscenze
Students will be assessed on the basis of their participation to in-class debates. Furthermore, they will be asked to produce presentations and a final written essay in which they will submit a critical analysis of a practical issue connected to the topics discussed during the course. The final evaluation will take into account both the knowledge of the course material and the critical skills developed.

Capacità
Students will develop or improve both the ability to think critically about social and ethical issues connected to the use of information technologies and the analytical skills that are necessary to approach such problems thoroughly.

Modalità di verifica delle capacità
Skills will be assessed during in-class debate, practical exercises, oral presentations, and by assessment of written essays.

Comportamenti
Students will be encouraged to develop critical awareness of the ethical and social impact of information technologies. They will be spurred to express their opinions with clarity and to defend them from objections or counterarguments. Students will engage in debate with their pairs and learn how to weigh different stances in an open, inclusive, and challenging learning environment.

Modalità di verifica dei comportamenti
Readiness to participate, clarity of expression, communicative attitudes and analytical insight will be assessed during in-class debate, practical exercises, and oral presentations.

Indicazioni metodologiche
Teaching methods will include traditional lectures with the aids of slides, in-class debate, practical activities, student presentations, and talks delivered by experts. The course is organized as a series of seminars, so the active participation of students will be essential. The course will be held in English.
(codice corso yynbriu)

Programma (contenuti dell'insegnamento)
The purpose of this course is to offer a thorough overview of the most debated issues in the fields generally known as Ethics of Information Technologies and AI Ethics. The lectures will cover the following topics, not necessarily in the listed order:

- Information technologies, purposeful behavior and intelligence;
- Singularity and Superintelligence;
- Artificial Agency, Free Will, Consciousness;

- Artificial Agents and Responsibility;
- Machine Ethics;
- AI Ethics and Roboethics;
- Machine Learning, Big Data, and Bias;
- Anthropomorphism, Human-Computer/Robot Interaction (HCI, HRI), and Human Dignity;
- Automation, AI, and Labour;
- Automation, AI, and Social Equity;

Possible practical cases for students' presentations:

- Sex robots;
- Military robots;

- Self-driving cars;
- Expert systems: COMPAS, Watson;
- Anthropomorphic emotional/social robots;
- Microsoft Tay's Twitter misadventure;
- Machine artistic creativity (TheNextRembrandt, Obvious Art, Shimon, …), and so on.

Bibliografia e materiale didattico

Students will be asked to read at least 6 papers from the following list:

- Nick Bostrom – Ethical Issues in Advanced Artificial
- John Searle – Minds, Brains, and
- Andreas Matthias – The Responsibility
- James Gips – Towards the Ethical
- Nick Bostrom and Eliezier Yudkowsky – The Ethics of Artificial
- AI4People – Ethical Frameworks for a Good AI
- Joanna Bryson – Semantics Derived Entirely From Language Corpora Contain
- Helen Nissenbaum – How Computer Systems Embody
- Reuben Binns – Algorithmic Accountability and Public
- Sharkey – Robots and Human Dignity.
- Carl Benedict Frey et – The Future of Employment: How Susceptible Are Jobs to Computerization?
- Kaplan – Impact of AI on Social Equity.

For a general introduction to the topics that will be discussed in class, the following title is strongly recommended (but not compulsory): Jerry Kaplan, Artificial Intelligence: What Everyone Needs to Know, Oxford, Oxford University Press (2016).
Further materials will be provided in class and made available through a dedicated page on Google Classroom. Indications concerning material for oral presentations will be given in class.

Indicazioni per non frequentanti

Please contact the lecturers.

Modalità d'esame

Written essay: students will be required to produce a ~6000 words essay related to the topics of the course. The outcome of the exam will be successful if the students will be able to:

- analyze the technologies involved from an ethical and social point of view,
- interpret a practical case in a critical light,
- elaborate claims in a clear and thorough fashion,
- consider counterarguments or possible objections, and
- engage in a debate with their

The active participation of the candidate to in-class debates will also play its part in the final evaluation.

Pagina web del corso

https://meet.google.com/qvj-bbbq-dfq

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