COURSE DESCRIPTION CARD - SYLLABUS

Course name
AI Ethics [S1DSwB1>EAI]

Course

Field of study
Data Science in Business

Year/Semester
3/6

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

dr Michał Weres
michal.weres@put.poznan.pl

Lecturers

Prerequisites

Students should have a basic understanding of artificial intelligence and machine learning, including a general awareness of how AI models work and their applications. It is also recommended that they possess critical thinking skills, the ability to analyze the consequences of technology, and a readiness to engage in discussions on the ethical and social aspects of AI.

Course objective

The aim of the course is to familiarize students with the key ethical challenges related to artificial intelligence. Students will analyze the impact of AI on society, privacy, equality, and accountability for decisions made by algorithms. Topics such as model bias, AI system transparency, and legal regulations will be discussed. The course develops the ability to think critically about the consequences of implementing AI in business and everyday life.

Course-related learning outcomes

Knowledge:
• Describes key ethical challenges related to AI, including data bias, discrimination, privacy, and surveillance systems [DSB1_W06].

• Explains basic ethical and philosophical concepts in the context of artificial intelligence, including accountability for algorithmic errors and AI safety [DSB1_W08].

Skills:
• Analyzes the impact of AI on society, the labor market, and public safety, taking into account legal regulations and autonomous decision-making systems [DSB1_U06].
• Critically evaluates the functioning of AI systems, assessing their transparency, explainability, and the ethical implications of their applications [DSB1_U07].
• Argues different positions in the debate on AI ethics, presenting counterarguments and assessing the impact of technology on sustainable development [DSB1_U11].

Social competences:
• Critically analyzes their own attitudes toward the ethical challenges of AI, considering the consequences of using technology in various areas of life [DSB1_K01].
• Assumes responsibility for the implementation and development of AI systems in accordance with ethical principles and standards of responsible technology management [DSB1_K05].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Throughout the course, a student can earn a total of 100 points. There are two formative assessments. The first is a written case study conducted halfway through the course, for which students can earn up to 50 points. The second is a written test (colloquium) held at the end of the course, also worth up to 50 points. The passing threshold is 50 points in total from both formative assessments.

Programme content

The course covers fundamental issues of ethics in the context of artificial intelligence. Students will explore philosophical concepts of ethics and key challenges related to AI, such as data bias, discrimination, privacy, and surveillance. Topics will include accountability for algorithmic errors, AI system safety, and legal regulations. The course also addresses the impact of AI on the labor market, healthcare, climate, as well as risks associated with deepfakes and autonomous weapons systems. An important component of the course is the analysis of AI model explainability and reflection on the future of AI ethics.

Course topics

Introduction to Axiology
Philosophical Concepts of Ethics
Introduction to AI Ethics
History and Philosophical Foundations of AI Ethics
Main Ethical Challenges in AI
Bias in Data and AI Models
Ethical Challenges in AI Classification and Decision-Making
AI and Social Discrimination
AI and Data Privacy
Surveillance Systems and Facial Recognition
Big Data, Personalization, and the Ethics of AI Advertising
Who Is Responsible for AI Errors?
Algorithm Safety and AI in Critical Systems
Legal Regulations Concerning AI
AI Ethics in Job Automation
Deepfakes, Disinformation, and the Ethics of Generative AI
AI in the Military and Autonomous Weapons Systems
AI Ethics in Medicine
AI, Climate, and Sustainable Development
Transparency and Explainability of AI Models
Can AI Be Conscious?
The Future of AI Ethics

Teaching methods

Problem-based lecture, moderated discussions, case study analysis

Bibliography

Basic:
Sinnott-Armstrong, W., Borg, J.S., Conitzer, V. (2024). Moralna AI. Czy bać się sztucznej inteligencji, Prószyński Media
Tegmark, M. (2019). Życie 3.0: człowiek w erze sztucznej inteligencji. Prószyński i S-ka

Additional:
Powell, J., Art., K. (2024). Dylemat sztucznej inteligencji. 7 zasad odpowiedzialnego tworzenia technologii, Helion
Kaplan, J. (2019). Sztuczna inteligencja. Co każdy powinien wiedzieć, Wydawnictwo Naukowe PWN
Pawłowska-Nowak, M., & Nowak, M. (2023). Metoda pomiaru poziomu zaufania do technologii. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 67(5), 150-161.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50