GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Applications of AI methods in enterprise, PG_00045376		
Field of study	Data Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	Optional subject group Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Tomasz Deręgowski	
	Teachers	dr inż. Tomasz Deręgowski	

Lesson type and method of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	E-learning hours included: 0.0						

Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
	Number of study hours	45	4.0	51.0	100

Subject objectives	The aim of the course is to acquaint students with the possible applications of artificial intelligence in the enterprise

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K03] Knows how to cooperate or work in a project team and take managerial or executive functions.	Student is able to collaborate or work in the project team and takes managerial or executive.	[SK1] Assessment of group work skills
[K6_W06] Knows the criteria and concepts of artificial intelligence, understands the operation of algorithms for intelligent computing, the concept of descriptive logic, combinatorial optimization algorithms, methods of construction, analysis and evaluation of algorithms, including discrete ones and problems of resolving conflicts in non-algorithmic decision making.		
[K6_U01] programs in procedural, object, functional and logic programming languages, codes programs at the processor instruction level, runs and tests programs.		

Subject contents	Machine learning methods and their application in business. Support decision-making methods of artificial intelligence Inductive, deductive and abductive reasoning Decision trees Machine learning: classification and clustering Bayesian networks Genetic algorithms Evolutionary programs Fuzzy logic, Neural networks, deep learning Knowledge representation in logic Creating models based on artificial intelligence methods: recommendation systems, expert systems, "Bag-of-words" based text-mining techniques
Prerequisites and co-requisites	No requirements

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Reports	60.0%	50.0%
Exam	60.0%	50.0%

Recommended reading	Basic literature	Flasiński, M. (2011) Wstęp do sztucznej inteligencji, PWN Goczyła, K. (2011) Ontologie w systemach informatycznych, Exit Mykowiecka, A (2007) Inżynieria lingwistyczna, PJWSTK
	Supplementary literature	Gurney, K (1997) An introduction to neural networks
	eResources addresses	
Example issues/ example questions/ tasks being completed	Generating a decision tree for decision support Back propagation learning algorithm for non-linear neural network Genetic algorithm in prediction of time series	
Work placement	Not applicable	