University of Gdańsk

Subject card

Subject name and code	Introduction to Machine Learning, PG_00153499		
Field of study	Mathematical Modeling and Data Analysis		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	Master's studies	Subject group	Obligatory subject group in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	6.0
Learning profile	academic	Assessment form	exam
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marek Krośnicki	
	Teachers	dr hab. inż. Marek Krośnicki	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	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	60	10.0	80.0	150

Subject objectives	Familiarization with advanced machine learning methods. Acquiring the ability to use machine learning algorithms - working in the Python environment

Learning outcomes

Course outcome	Subject outcome	Method of verification
[MMiADMU2_K02] is ready to precisely formulate questions to deepen his own understanding of a given topic or to find missing elements of reasoning	n/a	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[MMiADMU2_K01] is ready to recognize the limitations of his own knowledge and is ready to continue his education	n/a	[SK8] observation of student's independent or team work
[MMiADMU2_W05] knows and fully understands selected software packages or IT techniques used for symbolic calculations or for statistical data processing	n/a	[SW2] presentation/project/paper/ report
[MMiADMU2_K06] is ready to form an opinion on basic mathematical issues	n/a	[SK1] oral statement/conversation/ discussion
[MMiADMU2_K05] is ready to independently search for information in literature, also in foreign languages	n/a	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[MMiADMU2_W04] knows and understands the theoretical basis of computational methods and IT techniques used to solve problems in a selected field of mathematics	n/a	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[MMiADMU2_U11] can evaluate, at a basic level, the usefulness of mathematical methods and IT tools	n/a	[SU2] presentation/project/paper/ report
[MMiADMU2_U06] is able to apply methods and examples from a selected field of mathematics in related fields	n/a	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[MMiADMU2_K04] is ready to understand and appreciate the importance of intellectual honesty in the actions of himself and others; is ready to act ethically	n/a	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work

Subject contents

n/a

Prerequisites and co-requisites

n/a

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	30.0%
	100.0%	70.0%

Recommended reading

Basic literature	1. G. James, D. Witten, T. Hastie, R. Tibshirani, J. Taylor n Introduction to Statistical Learning with applications in Python, 2023, https://www.statlearning.com/ 2. S. Raschka, V. Mirjalili, Python Machine Learning, Packt 2019
Supplementary literature	
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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