Меѓународен Универзитет Визион - International Vision University
Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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SYLLABUS

COURSE NAME	COURSE CODE	SEMESTER	COURSE LOAD	ECTS
MACHINE LEARNING	**CEN-4007**	**7**	**180**	**5**

Prerequisite(s)	None

Course Language	Turkish
Course Type	Eelective
Course Level	First Cycle
Course Lecturer	
Course Assistants	
Classroom	
Extra-Curricular Office Hours and Location	

Course Objectives	Machine learning is the science of getting computers to act without being explicitly programmed. In the past decade, machine learning has given us self-driving cars, practical speech recognition, effective web search, and a vastly improved understanding of the human genome. Machine learning is so pervasive today that you probably use it dozens of times a day without knowing it.
Course Learning Outcomes	The aim of the course is for students to get acquainted with the basics of modern techniques in the field of machine learning. Upon completion of the course candidates will: have in-depth knowledge of advanced technologies and machine learning methods; will be able to understand, analyze and formulate general problems in the field of machine learning; will be able to successfully apply machine learning algorithms to solve real problems; will be able to conceptualize, analyze, realize and evaluate the performance of a machine learning system.
Course Contents	Introduction to machine learning. Linear regression with one or more variables. Logistic regression, hypothesis representation, cost functions, error evaluation, model selection, and validation. Neural networks, regularization in neural networks. Graphic models, bass networks, random markup fields. Kernel methods, machines with carrier vectors. Unsupervised learning and encouraging learning. Deep learning.

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

Week	Subjects	Related Preparation
1	Introduction to Machine Learning	Related Chapters of Course Sources
2	Inductive Classification	Related Chapters of Course Sources
3	Decision Tree Learning	Related Chapters of Course Sources
4	Ensemble Learning	Related Chapters of Course Sources
5	Experimental Evaluation of Learning Algorithms	Related Chapters of Course Sources
6	Computational Learning Theory	Related Chapters of Course Sources
7	Mid-term Exam	Related Chapters of Course Sources
8	Rule Learning: Propositional and First-Order	Related Chapters of Course Sources
9	Artificial Neural Networks	Related Chapters of Course Sources
10	**Support Vector Machines**	Related Chapters of Course Sources
11	Bayesian Learning	Related Chapters of Course Sources
12	Instance-Based Learning	Related Chapters of Course Sources
13	Text Classification	Related Chapters of Course Sources
14	Project Presentation	Related Chapters of Course Sources
15	Final Exam	Related Chapters of Course Sources