

Introduction to Machine Learning					
Course code CIF62017	student workload 120 hours	credits (according to ECTS) 6	semester Sem.4	frequency even. semester	duration 16 meetings
1	Types of courses <i>Compulsory</i> (Study Programme level)	contact hours 84 hours	independent study 36 hours	class size 40 students	
2	Prerequisites for participation Have completed Artificial intelligence with D as the minimum grade.				
3	Learning outcomes <p>Graduates are able to develop professional careers in the field of computer science based on quality aspects, data-based decision making, be responsible, and make continuous improvements. (IF-ILO-3)</p> <p>Graduates have the ability to think computationally, design-based thinking, conduct analysis with scientific writing, and are able to apply the values of Technopreneurship in creating product innovations in the Systems or Information Technology domain. (IF-ILO-4)</p> <p>Mastering the theoretical concept and principles of computer science, especially in the aspect of algorithms, programming, intelligent systems, information management, parallel and distributed computing, information security, human-computer interaction, software engineering, and fundamentals of computer systems and networks. (IF-ILO-7)</p> <p>Graduates are able to analyze, design, build and evaluate an intelligent system that has the ability to learn from the environment. (IF-ILO-10)</p>				
4	Subject aims <ol style="list-style-type: none"> 1. Students are able to explain the concepts of machine learning. 2. Students are able to explain the data representations. 3. Students are able to implement the data preprocessing. 4. Students are able to apply classification algorithm. 5. Students are able to apply a clustering algorithm. 6. Students are able to show the appropriate evaluation methods for a classification algorithm and clustering algorithm. 				
5	Teaching methods lectures, case study, class discussion, presentation				
6	Assessment methods assignment, mid-term examination, end-term examination, project evaluation, practical-skill assessment				

7	<p>This module is used in the following degree programmes as well</p> <p>Information Engineering</p>
8	<p>Responsibility for module</p>
9	<p>Other information</p> <ol style="list-style-type: none"> 1. Dietterich, Thomas et al 2010, . Introduction to Machine Learning Second Edition Adaptive Computation and Machine Learning. 2. Shai Shalev-Shwartz and Shai Ben-David, 2014, Understanding MachineLearning Theory Algorithms, Cambridge University Press. 3. Alpaydin, E., 2004. Introduction to machine learning. Adaptive computation and machine learning. Cambridge, Mass: MIT Press.