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Class URL: https://human-centered.ai/seminar-explainable-ai-2019

Seminar "explainable AI" xAI class of 2019 (blocked class)

Semester hours: 2.0 h; ECTS-Credits: 3.0; Type: SE with Exercises
ECTS-Breakdown (sum=75 h = 3 ECTS; 1 ECTS = 25 h workload, equiv. 0,5 Credit Units):

Presence during lecture	8 * 1,5 h	12 h
Working on the assignments	4 * 8 h	32 h
Preparation for the written exam	8 * 3 h	24 h
Discussion on ethical, legal and social issues of xAI	4 h	04 h
Written exam and presentation of assignments	3 h	03 h
TOTAL students' workload		**75 h**

Nr	Day, Date	Time	h	Topic
00	Monday, 15.07.2019	08:15-09:45	1,5	Module 00: Primer on Probability and Information Science (optional for students who need a refresher)
01	Monday, 15.07.2019	10:15-11:45	1,5	Module 01: Introduction: from automatic machine learning to interactive machine learning and explainable AI
02	Monday 15.07.2019	13:15-14:45	1,5	Module 02: Decision Making and Decision Support: from the underlying principles to understanding the context
03	Monday 15.07.2019	15:15-16:45	1,5	Module 03:- From Decision Support Systems to Explainable AI and some principles of Causality
04	Tuesday 16.07.2019	10:15-11:45	1,5	Module 04: Top-Level view of Explanation Methodologies: from ante-hoc to post-hoc explainability
05	Tuesday 16.07.2019	13:15-14:45	1,5	Module 05: Selected Methods Part 1: LIME, BETA, LRP, Deep Taylor Decomposition, Prediction Difference Analysis
				Assignment A1 out
06	Wednesday 17.07.2019	15:15-16:45	1,5	Module 06: Methods Part 2: Vis CNN with DCNN, inverting CNN, guided backpropagation, deep generator nets, TCAV
				Assignment A2 out
07	Thursday 18.07.2019	13:15-14:45	1,5	Module 07: Selected Methods Part 3: Feature Vis, Deep Vis, cell state analysis, fitted additive, iML human-in-the-loop
				Assignment A3 out
08	Friday 19.07.2019	13:15-14:45	1,5	Module 08: Selected Methods Part 4: Sensitivity, Gradients, DeepLIFT, Grad-CAM, integrated gradients
				Assignment A4 out
09	Monday 22.07.2019	13:15-14:45	1,5	Module 09: Ethical, Legal and Social Issues: human-in-control, accountability, responsible AI, bias, fairness, truth
	Monday 22.07.2019	15:15-18:15	4,0	Group discussion on ethical, legal and social issues of xAI
	Time for exam preparation and finalizing the assignments			
10	Friday 02.08.2019	10:15-11:45	3,0	Final written exam and presentation of the assignments by each student group