

Hauptstudienrichtung Machine Learning/Artificial Intelligence (AI) für den Masterstudiengang Data Science (gem. § 51 FPODataScience)

Modul Nr.	Modulbezeichnung	Modulverantwortlicher	Lehrveranstaltung	SWS					Gesamt ECTS	Workload-Verteilung pro Semester in ECTS-Punkten:				Art und Umfang der Prüfung/Studienleistung	Modul Nr.
				V	Ü	P	S	T		1. Sem	2. Sem	3. Sem	4. Sem		
4-5	Advanced Machine Learning for Anomaly Detection	Bernhard Kainz	Advanced Machine Learning for Anomaly Detection				2		2.5	[2.5]	[2.5]	[2.5]	[2.5]	Presentation (30 min.)	4-5
	Introduction to Explainable Machine Learning	Thomas Seel, Simon Bachhuber, Ivo Weygers	Introduction to Explainable Machine Learning	2					5		[5]		[5]	Written exam with multiple choice (60 min.)	
			Übungen zu Introduction to Explainable Machine Learning		2						[]		[]		
	Künstliche Intelligenz I ¹	Michael Kohlhase	Artificial Intelligence I	4					7.5	[7.5]		[7.5]		Written exam (90 min.)	
			Übungen zu Artificial Intelligence I		2						[]		[]		
	Künstliche Intelligenz II ¹	Michael Kohlhase	Artificial Intelligence II	4					7.5		[7.5]		[7.5]	Written exam (90 min.), bonus points via exercises	
			Übungen zu Artificial Intelligence II		2						[]		[]		
	Maschinelles Lernen für Zeitreihen	Dario Zanca, Björn Eskofier, Oliver Amft	Maschinelles Lernen für Zeitreihen	2					5	[5]		[5]		Written exam (90 min.)	
			Maschinelles Lernen für Zeitreihen Übung		2						[]		[]		
	Mathematische Forschung zu Deep Learning ²	Daniel Tenbrinck	AG Mathematics of Deep Learning				2		5	[5]	[5]	[5]	[5]	Oral exam (15 min.) or written exam (90 min., multiple choice)	
	Mathematische Grundlagen zu Künstliche Intelligenz, Neuronale Netze und Data Analytics I	Hans Georg Zimmermann	Mathematische Grundlagen zu Künstliche Intelligenz, Neuronale Netze und Data Analytics I	2					5	[5]		[5]		Oral exam (15 min.)	
	Mathematische Grundlagen zu Künstliche Intelligenz, Neuronale Netze und Data Analytics II	Alexander Martin	Mathematische Grundlagen zu Künstliche Intelligenz, Neuronale Netze und Data Analytics II	2					5		[5]		[5]	Oral exam (15 min.)	
	Pattern Analysis	Christian Riess	Pattern Analysis	3					5		[5]		[5]	Written exam (60 min.)	
			Pattern Analysis Programming		1						[]		[]		
Pattern Recognition	Andreas Maier	Pattern Recognition	3					5	[5]		[5]		Written exam (90 min.)		
		Pattern Recognition Exercises		1						[]		[]			
Project seminar	Project responsables	Project seminar				4		5	[10]	[10]	[10]		Presentation, code, report		
		Project seminar				2			[5]	[5]	[5]				
Reinforcement Learning	Christopher Mutschler	Reinforcement Learning	2					5		[5]		[5]	Oral or written exam		
		Reinforcement Learning Übung		2						[]		[]			
Software-Anwendungen mit KI (5-ECTS) ¹	Dirk Riehle	Software-Anwendungen mit KI	2					5		[5]		[5]	Homework		
Summe Hauptstudienrichtung Machine Learning/Artificial Intelligence (AI) für den Masterstudiengang Data Science								30	5-15	5-15	10	0			
								20	5-15	5-15	0	0			

Fußnoten:

¹ The teaching and examination language is German or English (at the student's choice).

² This module is not offered regularly.