

## Wahlkursbeschreibung Sommersemester 2020

<b>Titel</b>	<b>Using Machine Learning in the Creative Problem Solving Process</b>
<b>Cluster Title PO 07</b>	MEP9 Advanced Informatics
<b>Cluster Title PO 2012</b>	ME2_10 Advanced Media Systems
<b>Cluster Title PO 2014</b>	ME-IT_03 – Interface Technology
<b>Erster Kurstermin</b>	25./26.4, Restplatzbelegung bis zum 20.4. direkt bei der Dozent_in. Virtueller Klassenraum. Die Teilnehmenden erhalten vor Beginn weitere Infos.

<b>Kursdaten</b>	Credit Points	5 credit points					
	Workload/Semester	125-150 h					
	Kursdauer/Woche **	4 SWS					
	Teilnehmerzahl nach CNW	20					
	Minimale Teilnehmerzahl	8					
	Kurszeitraum	06.04.-21.6.20, Präsentation 8.-10.7.20					
	Der Kurs findet statt am	<b>Sa/So (Block-Kurs), jeweils 9:30 – 17:00</b>					
	Kursfrequenz	wöchentlich		2-wöchentlich		Als Block	<b>x</b>
	Kurszeitraum**** (Block = 90 min)	Block 1 8:30		Block 2 10:15		Block 3 12:00	
		Block 4 14:15		Block 5 16:00		Block 6 17:45	
	Unterrichtssprache	<b>English</b>			<b>x</b>	German	<b>x</b>
	Geeignet für Studierende der Studiengänge	<b>DM</b>			<b>x</b>	<b>AG</b>	
		<b>IMD</b>			<b>x</b>	<b>MP</b>	
		<b>SMP</b>				<b>IW (BA)</b>	
		<b>OJ/WJ/OK</b>				<b>KMI</b>	
<b>Inhalt(e):</b>	Design		Informatics / Technology	<b>x</b>	Economy / Business	Culture	
Zeitraum falls Block-Kurs	25./26.4., 23./24.5., Präsentation 8.-10.7.20						

Kursvorstellung						
DozentIn Name(n)	Meghan Kane					
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Kontakt -Prof. @ fbmd	garrit.schaap@h-da.de					
Unterrichtsform	Vorlesung		Vorlesung + Seminar	x	Seminar	Project
Inhalt des Kurses	<p>In this project focused course, students will learn how to use machine learning (ML) as a tool for solving problems when developing creative digital products. The class will explore a variety of ML applications, cover basic ML conceptual foundations, and provide an introduction to industry standard ML tools such as TensorFlow. Students will develop a better intuition of when it's practical to use ML and when it's not.</p> <p>By the end of the class, students will present a project that uses ML for at least one of its features. Their project should demonstrate a basic understanding of ML core concepts, a more in-depth understanding of their chosen ML application, and an ability to apply it. Students can choose a project that extends an example project from class or build their own original project. There will be time during class for students to have guidance on coming up with an idea and building their project throughout the course.</p> <p>Some example ML applications and underlying basic foundations we will explore are:</p>					

	<ul style="list-style-type: none"> <li>• Computer vision to perform image/video classification and object detection</li> <li>• Natural language processing to extract meaning from text</li> <li>• Activity classification of sensor data</li> <li>• Style transfer to transform images into your favorite artist's style</li> </ul>
Prüfungsart	Hausarbeit <input type="checkbox"/> Arbeit <input checked="" type="checkbox"/> Papier <input type="checkbox"/> Anderes <input type="checkbox"/>
Eignung für	X Anfängerkurs X Fortgeschrittenen-Kurs Profi-Kurs
Teilnahmebedingungen	<p>Students should feel comfortable reading and writing basic code in one language*. A basic introduction to programming course in the past is sufficient to take this course.</p> <p>*Ideally JavaScript, Python, or Swift, because these are supported best by the current ML industry standard tools.</p>
Info zum Dozenten	<p>Meghan Kane is a software engineer and researcher based in Berlin who specializes in machine learning. She has worked as a software engineer at places such as the MIT Media Lab, SoundCloud, Novoda, and as a freelancer. She has taught workshops and given talks in various countries on software development and is the author of the "Machine Learning for iOS" free Udacity course. Originally from the USA, she studied mathematics and computer science at MIT. She has lived in Germany for 3 years and speaks B2 level German. While the class will technically be in English, communicating in a mix of English and German can be done if needed.</p>
Weitere Hinweise	<p><b>Der Kurs wird aufgrund der Pandemie präsenzfrei durchgeführt. Inhalte können sich hierdurch verändern.</b></p>