

Künstliche Intelligenz in Unternehmen						
Kennnummer	Workload	Credits/LP	Studiensemester	Häufigkeit des Angebots	Dauer	
	180 Std.	6	1	Nur Sommersemester	1 Semester	
1	Lehrveranstaltungen		Sprache	Kontaktzeit	Selbststudium	Geplante Gruppengröße
	a) Künstliche Intelligenz in Unternehmen		a) English	a) 45 Std.	a) 135 Std.	a) 15
2	<p>Lernergebnisse/Kompetenzen</p> <p>Nach erfolgreicher Teilnahme am Modul können die Studierenden ...</p> <p>Wissen (1)</p> <p>... • ...outline concepts of AI. • ...list data science methods and tools in the context of AI. • ...list AI algorithms and methods. • ...discuss the applicability of AI methods to business problems. • ...describe the strength and weaknesses of AI methods. • ...illustrate solution options for AI approaches. • ...use AI techniques to address business problems. • ...perform tests to validate machine learning models. • ...judge the applicability of AI models for business problems. • ...select and judge AI methods. • ...design and construct AI solutions.</p>					
3	<p>Inhalte</p> <p>a) - AI foundations</p> <ul style="list-style-type: none"> - Types of AI approaches - AI application scenarios <p>- Concepts and tools of Data Science</p> <ul style="list-style-type: none"> - The data science process - Application areas of data science and AI - Software for data science and AI <p>- Pre-processing</p> <ul style="list-style-type: none"> - Data integration - Data cleaning <p>- Exploratory data analysis</p> <ul style="list-style-type: none"> - Data visualization - Descriptive statistics <p>- Building AI models</p> <ul style="list-style-type: none"> - Feature engineering - Classification mechanisms - Regression models - Clustering mechanisms - Forecasting techniques <p>- Evaluating machine learning models</p> <ul style="list-style-type: none"> - Error measures and visualizations - Test strategies 					

	<ul style="list-style-type: none"> - Evaluation from a business perspective <ul style="list-style-type: none"> - Cost based evaluation - Explainable AI for model analysis - AutoML Concepts <ul style="list-style-type: none"> - AutoML pipelines and tools - Hyperparameter tuning
4	<p>Lehrformen</p> <p>a) Vorlesung / Übung</p>
5	<p>Teilnahmevoraussetzungen</p> <p>Basic programming knowledge</p>
6	<p>Prüfungsformen</p> <p>a) Prüfungsleistung 1K (50%) (Klausur) (6 LP insgesamt für alle Teilprüfungsleistung dieser Lehrveranstaltung)¹</p> <p>a) Prüfungsleistung 1sbA (50%) (Praktische Arbeit)¹</p>
7	<p>Verwendung des Moduls</p> <p>Business Application Architectures M.Sc. (BAM)</p>
8	<p>Modulbeauftragte/r und hauptamtlich Lehrende</p> <p>Prof. Dr. Holger Ziekow (Modulverantwortliche/r)</p>
9	<p>Literatur</p> <p>a) • Foster Provost, Tom Fawcett: Data Science for Business- What You Need to Know about Data Mining and Data-Analytic Thinking, O'Reilly Media, Inc., August 2013, ISBN-10: 1449361323 • Cathy O'Neill: "Doing Data Science", published by O'Reilly Media, Inc., 2013, ISBN-10: 1449358659 • Sandya Mannarswamy. Data Science: Learn the What, Where, and How of Data Science, published by Apress, 2015, ISBN10 1430261188 • Ian H. Witten, Eibe Frank, Mark A. Hall, Christopher Pal: Elsevier, Morgan Kaufmann: Amsterdam, Boston, Heidelberg, London, New York, Oxford, Paris, San Diego, San Francisco, Singapore, Sydney, Tokyo, 2017, ISBN-10: 0128042915 • Ping, David. The Machine Learning Solutions Architect Handbook. 1st edition. Packt Publishing, 2022. ISBN: 9781801072168 • Teoh, Teik Toe, und Zheng Rong. Artificial Intelligence With Python. 1st ed. 2022. Singapore: Springer Singapore, 2022. ISBN: 9789811686153</p>

¹ Diese Prüfungsleistung ist nur bestanden, wenn alle Teilprüfungsleistungen mit mindestens "ausreichend" (4,0) bewertet werden.