Module title			Abbreviation
Programming with neural nets			10-I=PNN-182-m01
Module coordinator		**Module offered by**	
holder of the Chair of Computer Science VI		Institute of Computer Science	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Overview over NN, implementation of important NN-architectures like FCN, CNN and LSTMs, practical example for NN-architectures, among others in the area of image and language processing.

Intended learning outcomes

Knowledge about possible applications and limitations of NN, for important architectures (eg. FCN, CNN, LSTM) and how they are implemented in NN-tools like Tensorflow/Keras, ability to program network structures from literature, to prepare data and solve concrete tasks for NN.

Courses (type, number of weekly contact hours, language — if other than German)

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Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 to 120 minutes).
If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE, IT, IS, HCI, GE.

Workload

150 h

Teaching cycle

Teaching cycle: every year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Master's degree (1 major) Computer Science (2018)
Master's degree (1 major) Information Systems (2019)
Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)