Module title	Abbreviation
Programming with neural nets	10-I=PNN-252-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, KI, HCI, GE, IN

Workload

150 h

Teaching cycle

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

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Module appears in

Master's degree (1 major) Information Systems (2025)
Master's degree (1 major) Computer Science (2025)
Master's degree (1 major) Mathematical Data Science (2025)