

Course Description – Summer 2025

Computational Intelligence

Title	Computational Intelligence (Complnt)
Faculty	Computer Science
Professor	Prof. Dr. Martin Golz
ECTS	5
Level	Master
Requirements	Basic knowledge in linear algebra, analysis, and statistics as well as solid programming skills.
Add. Information	
Content	The students will get an introduction to the main tasks of computational intelligence and in particular to those of machine learning. Statistical learning theory is the subject of several lectures. Afterwards, multivariate linear discriminant and regression analysis as well as generalized linear models are presented. Important machine learning algorithms, e.g. support-vector machines, gradient boosting machines and artificial neural networks are introduced. The lectures finish with a first course on Deep Learning, offering insights into convolutional networks and deep recurrent networks.