



Organization of the Module “Advanced Methods for Geospatial Analysis”

Prof. Dr.-Ing. Martin Kada, M.Sc. Valentina Schmidt

Lecture (50%)

- Every Tuesday
between 10h and 12h
- Given by
Prof. Dr. Martin Kada

Labs (50%)

- Every Tuesday
between 12h and 14h
- Given by
M.Sc. Valentina Schmidt
- Hands-on experience in Python

Final examination: **oral examination covering all topics from lecture and labs**

- Introduction to Machine Learning
- Statistical Analytics
- Regression
- Clustering
- Decision Trees & Random Forests
- Neural Networks
- Convolutional Neural Networks (CNN)
- Computer Vision Tasks using CNN
- Recurrent Neural Networks
- Generative Adversarial Networks
- Deep Learning for 3D Data

Workload

- 6 CP → 180 academic hours
- 4 SWS → 4 academic hours attendance in class per week
→ **8 academic hours homework and preparation for exam per week**
- 15 weeks per semester → Homework & preparation for exam = 120 academic hours
- 120 academic hours → 90 real hours

