Advanced methods MSc/MA (MV-MSc)

Scripting for Remote Sensing of the Environment (MSc-Sem)

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Master seminar, ECTS-Studies, 2 SWS
Teaching language is English, bei Bedarf Deutsch
5 ECTS

Time: Monday 8:15 – 11:45, bi-weekly, start: 19.04.2020
Place: Tennenlohe, Room 00.133 (CIP), possible online format

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In the last few decades, scientists of all Earth-system disciplines have been blessed with the enormous flow of information from satellite remote sensing. Although we try to keep up with this development, the vast amount of data and its exploration is demanding. Streamlined processing work flows as well as, analysis, evaluation and assimilation algorithms have to be brought in place requiring multi-disciplinary approaches. In this class, we will therefore focus on stepping from manual image processing on a local computer to automated strategies in cloud environments or on high-performance computing (HPC) servers.

The class will cover an introduction to cloud/server computing, script-based data acquisition from prominent remote sensing portals, automated pre-processing and inference of derived quantities (e.g. spectral indices), analysis of time series, parallel computing, as well as data exploitation or assimilation with geophysical models. Programming tools comprise basic shell scripting as well as other prominent programming languages (R, python, etc.).

Don't panic! This class is designed for persons that do not have a background in informatics. Please contact me if you are interested in learning automated strategies to analyse Earth observation data but have doubts on the requirements.

For further administrative details please consult UniVIS.

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