

MORITZ RÖSCH

EDUCATION

today
|
10/2021

- **M.Sc., Applied Earth Observation and Geoanalysis of the Living Environment (EAGLE)**
Julius-Maximilians-University  Würzburg, Germany
- **B.Sc., Geography**
Julius-Maximilians-University  Würzburg, Germany
 - **Specialization:** Remote Sensing, Physical Geography
 - **Final grade:** 1,3
 - Member of the Geography Student Council (internal organization, treasurer, first semester advising, institute communication, organization of events and lecture series)



RESEARCH AND WORK EXPERIENCE

10/2022
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04/2022

- **Research assistant project “Megacities”**
Team City and Society  Würzburg, Germany
German Aerospace Center (DLR)
Chair of English Linguistics
Julius-Maximilians-University
 - Analyzing sociocultural structures in megacities using the spatial distribution of Twitter data
 - Data preparation of Twitter data (implementation of filter methods)
 - Application of geostatistical and linguistic methods

07/2021
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04/2021

- **Bachelor-Thesis**
Team Natural Hazards  Remote
German Aerospace Center (DLR)
 - **Thesis-Title:** Monitoring of volcanic natural hazards in Indonesia. Change analyses based on high-resolution PlanetScope data combined with further Earth observation data (in German)
 - Develop new methods for mapping volcanic natural hazards (e.g., lava) based on high-resolution PlanetScope data, infrared data (Sentinel-2, Landsat-8, Terra/Aqua MODIS, Soumi-NPP VIIRS), and digital elevation models

02/2021
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10/2020

- **Student assistant (tutor)**
Chair of Remote Sensing  Würzburg, Germany
Julius-Maximilians-University
 - Direction and preparation of tutorials for the lecture *Introduction to Geographic Remote Sensing*

BIOGRAPHY

Born on 29.04.1997 in Radolfzell, Germany.

I am passionate about the analysis, evaluation and visualization of geodata. My interests and research focuses on the use of passive and active satellite data for the analysis of geographic processes of the earth's surface, especially the monitoring of natural hazards as well as the monitoring of land surface changes in alpine and urban areas.

CONTACT

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 [moritzroesch](#)
 [moritzroesch](#)

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|-------------------------|---|-----------------------------------|
| 02/2021 04/2020 | Student assistant project “AgriSens” Chair of Remote Sensing Julius-Maximilians-University <ul style="list-style-type: none"> Collaboration in the development of an Open Data Cube (ODC) infrastructure Co-development of a Python package for processing multitemporal satellite data on the ODC platform Development of training and tutorial Jupyter notebooks for spatiotemporal analysis of geospatial data on the ODC platform | 📍 Würzburg, Germany |
| 03/2020 01/2020 | Intern Institute for Earth Observation Eurac research <ul style="list-style-type: none"> Evaluation of high-resolution PlanetScope data for applications in alpine regions Development of classification workflows for the mapping of mountain pine in South Tyrol Satellite-based monitoring of pest infestation and forest vitality | 📍 Bolzano, Italy |
| 12/2019 10/2019 | Intern Team Natural Hazards German Aerospace Center (DLR) <ul style="list-style-type: none"> Satellite-based volcano monitoring using thermal and infrared data Development of automated scripts for the calculation of erupted lava volume | 📍 Weßling, Germany |
| 09/2019 05/2019 | Student assistant project “LandKlif” Chair of Remote Sensing Julius-Maximilians-University <ul style="list-style-type: none"> Planning drone field campaign and taking aerial photos Processing of digital terrain models and orthophotos | 📍 Würzburg, Germany |
| 07/2019 10/2018 | Student assistant (tutor) Chair of Remote Sensing Julius-Maximilians-University <ul style="list-style-type: none"> Direction and preparation of the tutorials for the lecture <i>Introduction to Geographic Remote Sensing and Application of Remote Sensing in Geography</i> | 📍 Würzburg, Germany |
| 05/2017 04/2017 | Intern HYDRO-DATA GbR <ul style="list-style-type: none"> Data collection and analysis in the context of groundwater monitoring Field work with hydrological sampling Hydrological GIS modeling | 📍 Radolfzell am Bodensee, Germany |
| 04/2016 02/2016 | Intern COWA Service Gebäudedienste GmbH <ul style="list-style-type: none"> Data management and database maintenance Independent creation and management of IT training for branch offices | 📍 Gottmadingen, Germany |
| 08/2015 07/2015 | Intern Schwenninger Wild Wings Spielbetriebs GmbH <ul style="list-style-type: none"> Project collaboration in sports management | 📍 Schwenningen, Germany |

SOFTWARE SKILLS

- **Coding**
 - R (*advanced*)
 - Python (*intermediate*)
 - Google Earth Engine (*intermediate*)
- **Software**
 - QGIS, ArcGIS, ENVI (*advanced*)
 - SNAP, eCognition (*intermediate*)
 - GRASS GIS, SAGA GIS (*basic*)
 - MS Office (*advanced*)
- **Versionskontrolle**
 - Git, GitHub (*advanced*)

LANGUAGE SKILLS

- **Deutsch**
Native language
- **Englisch**
fluent in spoken and written
- **Französisch**
school knowledge

FURTHER EDUCATION

09/2019

- **SAR EDU summer school for applied radar remote sensing**
Friedrich-Schiller-University  Jena, Germany
 - five-day seminar (40 hours)

PUBLICATIONS

Rösch, M.; Plank, S. (2022). Detailed Mapping of Lava and Ash Deposits at Indonesian Volcanoes by Means of VHR PlanetScope Change Detection. *Remote Sensing*, 14, 1168. <https://doi.org/10.3390/rs14051168>

Rösch, M.; Sonnenschein, R.; Buchelt, S.; Ullmann, T. (2022). Comparing PlanetScope and Sentinel-2 imagery for mapping mountain pines in the Sarntal Alps, Italy. *Remote Sensing*, 14, 3190. <https://doi.org/10.3390/rs14133190>

FOREIGN EXPERIENCE

12/2016

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06/2016

- Stay abroad Asia, Australia, USA

Research interests

- Passive & active remote sensing
- Spatial data science
- Machine Learning & Deep Learning
- Natural hazards
- Alpine regions
- Urban regions
- Synthetic aperture radar
- GIS & webmap

Made with the R package `datadrivencv` and [pagedown](#).

The source code is available on [GitHub](#).

Last updated on 2022-07-06.