Luzius Brogli

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Professional Experience

2023 – **PhD Candidate**, *Institute of Cognitive Neuroscience of Memory and Consciousness*, University of Bern, Bern.

2021 – 2022 **PhD Candidate**, *Institute of Biomedical Engineering*, University of Ulm, Ulm.

2020 **Research Assistant**, *Mobile Health Systems Lab*, ETH Zurich, Zurich.

2015 – 2018 **Teaching Assistant**, *Department of Mathematics*, ETH Zurich, Zurich.

Projects

2021 **Human-in-the-Loop Sleep Stage Scoring**, *ETH Zurich & University of Ulm*.
Development and analysis of a scoring approach using an algorithmic scoring confidence measure combined with human re-scoring to improve performance.

2019 – 2021 **Automatic Sleep Stage Scoring**, *Mobile Health Systems Lab & Tosoo AG*, Zurich.
Development and application of deep learning models for EEG sleep data. Cooperation with research projects (University Hospital Zurich, University Zurich and ETH Zurich).

2020 **Low Back Pain Data Investigation**, *Mobile Health Systems Lab*, ETH Zurich.
Exploration methods to extract biomarkers from data collected in a low back pain study for objective measure of patient pain-level.

Teaching and Supervision

2022 **Master Thesis Supervision**, University of Ulm, Ulm.
Topic: "Real-time sleep stage classification using lightweight embedded deep learning".

2022 **Guest Lecturer and Lecture Coordinator**, *Introduction to Deep Learning*, University of Ulm, Ulm.

2022 **Student Project Supervision**, *Medical Wearables II*, University of Ulm, Ulm.

2021 – 2022 **Lecture Coordinator**, *Seminar on Biomedical Signal and Data Processing*, University of Ulm, Ulm.

2021 **Lecture Coordinator**, *Medical Wearables I*, University of Ulm, Ulm.

2021 **Internship Supervision**, ETH Zurich, Zurich.
Skiing accelerometer data analysis.

2015 – 2018 **Teaching Assistant**, ETH Zurich, Zurich.
Linear Algebra, Numerical Mathematics, Mathematics I.

Education

2023 – **Bachelor of Science in Psychology**, *University of Bern*.

2017 – 2019 **Master of Science in Computational Science and Engineering**, *ETH Zurich*.
Focus: Robotics
Master Thesis: "Single-Channel EEG Sleep Classification Methods using Deep Learning"
Semester Thesis: "Conditional Variance Regularization for Data Augmentation"

2012 – 2015 **Bachelor of Science in Computational Science and Engineering**, *ETH Zurich* .
Bachelor Thesis: "Kinect Sensor Interference Measurement"
First-year in Mechanical Engineering at ETH Zurich followed by direct admission to the third semester in Computational Science and Engineering

Skills

Languages German (native) | English (fluent) | French, Spanish (conversational)

Software Python, C++, Matlab, UNIX shell, TensorFlow/Keras, MongoDB, LaTeX