Research internship in sleep research with intracranial EEG (iEEG)

(150-300 hrs, 30-50% workload, negotiable)

We are offering a research internship in the Cognitive Computational Neuroscience Group for a motivated student interested in sleep, brain activity, and data analysis. The project will investigate sleep patterns using intracranial EEG (iEEG) recordings, which are high temporal- and spatial-resolution data invasively recorded from the human brain.

The data come from patients with drug-resistant epilepsy undergoing clinical monitoring at the hospital. To use them for generalizable sleep research, epileptic activity needs to be identified and removed to ensure that the analyses reflect typical brain processes rather than pathological patterns. The main task of the internship includes preparing the data and identifying epileptic activity, by manually annotating and cleaning the iEEG recordings. This offers the opportunity to learn about iEEG activity and how to distinguish epileptic activity from typical brain activity and gives insight into basic sleep research and data processing. Optionally, basic data analysis and visualization can be performed with Python, contributing to analyses on sleep-related brain activity. This work is essential for downstream research analyses and enables the use of these invasively recorded data for ongoing sleep research.

The research internship is unpaid but can be credited as an internship in Psychology. If interested, the internship can subsequently be extended to include a thesis.

Requirements

- Strong interest in neuroscientific research
- Reliable and independent working style
- Willingness to learn about iEEG data and how to identify epileptic patterns

What we offer

- Insight into sleep research using computational methods
- Gaining experience with rare and high-resolution iEEG dataset
- Opportunity to deepen and further develop additional skills (e.g. iEEG data analysis, programming in Python), depending on your interests

Start date: by arrangement

If you are interested or have any questions, please contact:
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