



Research Software Engineering Intern

Lifelines Neuro Company is a global EEG company known for its excellence in developing and engineering world class EEG amplifiers, committed to advancing healthcare through cutting-edge technology. Our products play a pivotal role in the diagnosis and treatment of neurological disorders, empowering healthcare professionals to provide accurate and timely patient care.

Based across the United States and Europe, with offices in Woking, UK and Louisville, KY, Lifelines is looking to help change the lives of those living with neurological disorders.

Position Overview:

Lifelines Neuro is seeking a talented Research Software Engineering Intern (doctoral student or postdoctoral fellow) to develop custom software for quantitative EEG (qEEG) analyses in drug development for brain disorders. Our team has a strong record of providing robust hardware solutions for clinical trials. We have also worked previously on custom pharmacokinetic/pharmacodynamic qEEG (regional and global power analyses based on time and drug dosing cohort) and would like to develop that capacity strategically within our current endeavours.

In this role, you would be reporting to the Head of Research and Development and Chief Scientific Officer. You would be focused on adapting, elaborating, and automating processing pipelines. You would be working directly with an electrical engineer and neuroscientist to build software that is high quality, efficient, accessible, and extensible. Ideally, with a strong understanding of electrical engineering and signal processing and the needs of both our clients and (internal) end-users, you will bridge the gap between research and production-level software.

Responsibilities:

- To generate limited scope project specifications with possibilities for elaboration of a data processing pipeline for pharmacokinetic/pharmacodynamic analyses and possibly more.
- To adapt from existing code, build, and maintain R (or other pervasive open source) packages geared towards analyses of clinical trials EEG data.
- To build high-quality, composable tooling that enables researchers to analyze clinical trials data asynchronously and in (near) real time.
- To automate data analysis and reporting, for both internal (e.g. scientists, executives) and external audiences (e.g. pharma, CROs).
- To collaborate closely to understand workflow pain-points and inefficiencies that can be resolved with better tooling and processes.
- To develop tooling for efficient dataset curation, versioning, and access to enable reproducible research.
- To generate generalizable data visualisation and plotting tooling to speed interpretation of results.

Qualifications and Experience

- Minimum of one year of hands-on experience in developing production-level software for research purposes.
- Solid knowledge in signal processing, statistics, and optimization.
- Demonstrated experience in crafting efficient, maintainable, and composable packages in R or other pervasive open source software.

- Enthusiasm for working with extensive time series biosignal data, such as EEG, with previous experience preferred.
- Comfort building cloud infrastructure tailored for the analysis of substantial datasets.
- Excellent verbal, written, and presentation skills.
- Ease working within a highly asynchronous hybrid environment, with a track record of successful past experiences.
- Experience levels ranging from Master's degree with 3-7 years, doctoral degree with 3-5 years, or equivalent comparable experience..

This is a remote, one month, full time contract project-based opportunity, with a fixed rate of \$10,000 for the one month. Ideal start date from 1st July but this is flexible.

Lifelines Neuro is an equal opportunity employer and prohibits discrimination and harassment of any kind, specifically with regard to age, race, colour, religion, sex, sexual orientation, gender identity, national origin, veteran or disability status, or family or parental status. We are committed to achieving a diverse workforce through all aspects of employment.

To apply for this role, please submit your CV and a cover letter to Dr Dona Murphey at dona.murphey@lifelinesneuro.com