

Job advertisement – Data Engineer

We are looking for a motivated data engineer to join our team at the Centre for Population Neuroscience and Stratified Medicine (PONS) at Charité Universitätsmedizin Berlin. The position will be located at Neurospin at Paris-Saclay. The main task is to maintain the IMAGEN (<https://imagen-project.org/>) and STRATIFY (<https://stratify-project.org/>) studies database, which is hosted at Neurospin. IMAGEN and STRATIFY are European research projects examining how biological, psychological, and environmental factors during adolescence and young adulthood may influence brain development and mental health. Using brain imaging and genetics, the project will help develop prevention strategies and improved therapies for mental health disorders in the future.

The database contains appr. 20 TB of clinical, genetic and neuroimaging data from a cohort of 2,400 participants, collected over 4 time points between 2010 and 2020, in 8 acquisition centres over 4 European countries. We have stored the data in files and strive to follow our domain's current standards with respect to file organization and format.

The main tasks include:

- gradually understanding our data, workflows, and data processing methods; helping end users of the database make the most of the published data;
- writing documentation and helping with its improvement;
- cleaning up and maintaining the backlog of tasks; prioritizing them together with management;
- identifying tasks related to the long-term maintenance of the database;
- addressing task in the backlog, alone or in conjunction with other teams already working on the data; maintaining and evolving processes and workflows related to data operations,
- basic administration of the Linux database server, with help from the IT support team; account and access rights management; migration from the existing publication server based on SFTP, to a new server based on NextCloud;
- continuously curating the existing data; inserting new data in the database, together with teams already working on specific data; organising and publishing the database in a readable and standardised way;
- striving for compliance with personal data regulations, in association with the teams already working on the subject in Berlin and Paris;
- processing data, together with end-users or teams already involved in data processing.

The complex and multifaceted field of employment will require a high degree of interdisciplinarity.

Qualification:

- Master's or PhD degree in a field relevant to the position.
- Good knowledge of Python and another higher programming language
- Knowledge of Linux-like operating systems
- Experience in dealing with large amounts of structured data
- Knowledge of data protection regulations
- Experience and knowledge of good clinical practice (GCP) standard and the conduct of clinical trials would be an advantage.

NeuroSpin is a research center for innovation in brain imaging. At NeuroSpin, physicists, mathematicians, neuroscientists, and doctors join forces to develop synergistically the tools and models that will allow to better understand the functioning of the normal and pathological brain, before or after treatment. Focused on neuroimaging, the research conducted ranges from technological and methodological developments (data acquisition and processing) to preclinical and clinical neuroscience, including cognitive neuroscience. Neurospin is part of the French Atomic Energy Commission (CEA).

PONS Centre addresses the complexity and heterogeneity of behaviour and mental illness across diagnoses by investigating environmental and genetic factors that influence the function and structure of the human brain on a global scale. By integrating brain research, epidemiology and genomics, our goal is to develop prevention approaches and early interventions worldwide that are based on causal neural mechanisms and tailored to the individual patient in their unique setting. PONS' key research goals include the development of targeted behavioural interventions to address global health challenges stemming from urbanisation, pollution, climate change, migration causes and consequences, and pandemics. PONS has two sites, PONS Charité and PONS Fudan, at the Institute of Science and Technology for Brain-inspired Intelligence (ISTBI), Fudan University, Shanghai.

Charité - Universitätsmedizin Berlin is a joint medical faculty, which serves both Freie Universität Berlin and Humboldt Universität zu Berlin. As one of the largest university hospitals in Europe with an important history, it plays a leading role in research, teaching, and clinical care. It is ranked fifth best hospital in the world and best in Europe.

The payment is according to the qualification of the collective agreement of the Charité Berlin.

For queries about the position, please contact Professor Gunter Schumann
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r. Dimitri Papadopoulos (dimitri.papadopoulos@cea.fr)

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