

PhD Position in Machine Learning for Healthcare

Implantable or wearable devices for out-of-hospital monitoring of electroencephalographic signals (EEG) over months to years have the potential to revolutionize diagnostics and treatment of patients suffering from neurological disorders by enabling personalized medicine on an unprecedented scale. The goal of this joint research project between the Department of Neurology at the University of Bern and IBM Research-Zurich is to develop machine learning methods for intracranial EEG signal analysis for the next generation of energy-efficient devices.

We are looking for enthusiastic candidates with outstanding technical skills and a strong interest in medical applications to join our research project. Applicants require in-depth programming and analytical capabilities, and a profound background in machine learning (e.g., deep learning) and biosignal processing. Some knowledge in hardware design is a plus. The successful PhD student will be expected to devise new state-of-the-art methods for energy-efficient analysis of ultra long-term intracranial EEG analysis.

About the University of Bern

The University of [Bern](#) is located at the heart of Switzerland. Internationally well connected and regionally anchored, the [University of Bern](#) cultivates exchange with society and strengthens partnerships between science, medicine business, and politics. The University of Bern is committed to a deliberate and ethical responsibility towards people, animate, and inanimate nature. The University of Bern is an equal opportunity employer and strives to increase the number of women at all levels in its faculties.

About IBM Research-Zurich

IBM has maintained a research laboratory in Switzerland since 1956. As the European branch of IBM Research, the mission of the [IBM Research-Zurich](#) Lab, in addition to pursuing cutting-edge research for tomorrow's information technology, is to cultivate close relationships with academic and industrial partners, be one of the premier places to work for world-class researchers, to promote women in IT and science, and to help drive Europe's innovation agenda. The Zurich lab is closely linked to IBM's ten research labs worldwide, and world-renowned for its scientific achievements—most notably two Nobel Prizes in physics. The Zurich lab focus areas are future AI, chip technologies, nanotechnology, fiber optics, supercomputing, data storage, security and privacy, risk and compliance, business optimization and transformation, and server systems.

More about the position

Salaries for PhD positions fellows start at CHF 47,000 per year (precise amount is determined by the University's department of Human Resources) and typically increase on a per-annum basis. The position is funded by the Swiss National Science Foundation (SNSF). The start date is expected to be at latest in the January-March 2022 time period

The PhD-student will be co-supervised by [Prof. Dr. Dr. Kaspar A. Schindler](#) from the Department of Neurology at Bern University Hospital, and [Dr. Abbas Rahimi](#) from the Neuromorphic and In-memory Computing Group at IBM Research-Zurich. She/He will join the [Graduate School for Cellular and Biomedical Sciences](#) and will work both at the Department of Neurology and at IBM. There are no teaching obligations. Strong communication skills in English are required.

Application deadline

Applications will be accepted until the positions are filled.

How to apply

Applications should be emailed to inselspital.ibm.pos@gmail.com. Contained must be a motivation statement (1-page max), CV, list of courses and grades, copies of diplomas and the contact information of at least two references.