Applications are invited for 2 post-doc positions based at LREN, Department of Clinical Neurosciences – CHUV, Lausanne, Switzerland – www.unil.ch/lren as part of the Swiss National Science Foundation funded project “Urban maps of the brain” led by Bogdan Draganski (UNIL) and Stephane Joost (EPFL). The 2 post-doc 100% positions are available for a period of 2 years in the first instance renewable on annual basis.

About the project Our goal is to understand endogenous and environmental factors of the urban environment that carry potential risks for cognitive decline and mental health deterioration. To this end, we are building brain-geographic space models and spatial simulation using rich behavioural, genetic, socio-economic, brain imaging and geo-referencing data from the longitudinal cohort CoLaus|PsyCoLaus (n≈1600). We use a range of modelling approaches including established neuroimaging, spatial stats, and more recent deep learning and AI techniques. More information can be found at www.unil.ch/lren/home/menuinst/teams-science/brain-health-plasticity.html

The positions are suitable for highly talented and motivated candidates with interests in using tools developed for data science and human brain imaging. The two post holders will work closely and complement each other while being part of a multidisciplinary team that includes researchers from LREN-CHUV and EPFL. While the researchers are expected to follow the LREN research programme, they will also be encouraged to consider developing original ideas and proposals of their own for improving and extending the Urban Brain maps models.

Qualifications and personal skills

Position 1 Imaging neuroscientist
- Applicants must hold a PhD degree in imaging/computational science or other relevant fields.
- Strong experience with scientific programming languages (Matlab, Python, C+++ etc)
- Familiarity with common MRI image processing software packages (such as SPM, FSL, or AFNI) is a must

Job description: Development and application of multi-variate statistical analysis methods in the context of multi-contrast anatomical MRI data. Maintain and further develop workflow management and processing pipelines for large-scale MRI data. The post holder will be responsible for software releases and ensure data quality control and validation of new applications.

Position 2 Data scientist/engineer
- Applicants must hold a PhD degree in data science, computer science, mathematics, statistics or similar.
- Experience in software development with deep learning framework (Tensorflow, PyTorch). Experience as a Fullstack developer or web development is an advantage.

Job description: Implementation and application of cutting edge ML techniques to large-scale heterogenous data. The post holder will be responsible for software releases and ensure data quality control and validation of new applications.

We offer
- An ambitious, international research environment with strong multi-disciplinary profile and opportunities for academic development
- Salary in accordance with the CHUV and Etat de Vaud regulations
- Latest starting date 01 Nov 2021

How to apply
- The application must include:
  - Cover letter - summary of motivation, research interests and career plan
  - CV including education, previous positions and experience
  - Relevant certificates and transcripts of records
  - List of publication including preprints & links to own github repository

Please send your CV, a letter of motivation, and names of at least two academics for reference to Bogdan Draganski - bogdan.draganski@chuv.ch

Review of applications will begin December 15, 2021; applications will be accepted until the positions are filled.