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barcelonaβeta
BRAIN RESEARCH CENTER

Researcher Position in Machine/Deep Learning Methods on Magnetic Resonance Imaging

About the employer

The Barcelonaβeta Brain Research Center (BBRC) is a new research center, constituted by the Pasqual Maragall Foundation. The goal of BBRC is to become an internationally recognized centre of excellence in our understanding of age-related cognitive disability in order to provide practical solutions to the global challenges posed by the world's aging population. Our goal will be achieved by championing primary and secondary prevention programs for Alzheimer's disease and other related neurodegenerative disorders, the study and promotion of healthy aging, and the research of the basic physiological mechanisms of cognitive functions affected by healthy or pathological aging such as memory, learning and decision-making, among others. The vision of BBRC is to provide the society with distinct and innovative solutions for age-related cognitive disability by leveraging these complementary research programs in order to attain a multidisciplinary comprehension of the aging process and the pathophysiology of neurodegeneration. At present BBRC deploys its research mission through two Research Programs, the Alzheimer's Prevention Program and the Memory Program.

Pasqual Maragall Foundation, Pompeu Fabra University and "la Caixa" on are permanent members of the BBRC Board. International competitive recruitment, state-of-the-art scientific facilities, effective management and continuous high-standard peer-review evaluation are the BBRC core proceedings to ensure achieving world-class research results. BBRC is affiliated and located in the Campus Ciutadella of the Barcelona Pompeu Fabra University, the building contains excellent technical facilities, including a research-dedicated 3T MR scanner, Clinical Trials facilities, EEG and Eye Tracker labs.

BBRC is also part of the Barcelona Biomedical Research Park (PRBB), a large research facility that hosts other seven different research institutions related to biomedical research, including the Center for Genomic Regulation (CRG), the Hospital del Mar Medical Research Institute (IMIM), the Department of Experimental and Health Sciences of the Pompeu Fabra University (CEXS-UPF), the Institute of Evolutionary Biology (IBE CSIC-UPF), the Barcelona Institute of Global Health (ISGlobal) and the Barcelona site of the European Molecular Biology Laboratory (EMBL), among others, in a multidisciplinary, collaborative and stimulating international environment in close contact with a clinical setting, thus conducive to translational research.

For more information see: www.fpmaragall.org and www.barcelonabeta.org

About the job

BBRC is looking for a PhD to develop deep learning methods to predict Alzheimer's disease preclinical stages based on Magnetic Resonance and wet biomarkers, as part of its Alzheimer's

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Prevention Program. This is a full-time position and the person selected will report to the Neuroimaging´s group leader.

Main Responsibilities:

- To develop and apply Machine/Deep learning techniques to MRI data to predict preclinical AD stages on the ALFA/ALFA+ datasets from the BBRC
- To develop the ML algorithms so that they are compatible with use in real-world scenarios
- To liaise with third parties to validate the performance of the developed algorithms
- To write technical reports, journal articles and present in scientific conferences

Required qualifications:

Qualifications and professional experience

- PhD in Neuroscience, Medicine, Computer Science, Bioengineering or related disciplines is mandatory
- Proven experience in modelling and/or deep learning is required.
- Strong understanding of the biological basis of AD and the course of AD biomarkers is needed.
- Experience in neuroimaging and/or genetic data analysis would be positively considered.
- Proven record of authorship on scientific is required.

Personal skills

- Experience working with large and multidisciplinary data sets is required.
- Database manipulation skills, with strong attention to detail.
- Proven ability to lead and orientate a team of computer scientists
- Interest in joining a non-profit organization with a mission of high social impact.
- Strong interpersonal skills (empathic and focused team-worker).
- Ability to think independently and work collaboratively.

We offer

- Full-time position.
- Salary will be in accordance with qualifications and experience.
- Start date: October 2019
- The research position is scheduled initially for two years (open to renewal).

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Application process:

To apply, please submit the following: 1) Cover letter; 2) CV; All files or inquiries should be submitted electronically to: rh@barcelonabeta.org

Subject: Researcher Position in Machine/Deep Learning Methods on Magnetic Resonance Imaging

Deadline: 30/09/2019

We inform you that your personal data will be part of a file which Pasqual Maragall Foundation and Barcelonaβeta Brain Research Center is responsible for, in order to manage the job offer you have requested. Once the process is complete, the data processed will be erased.

You have the right to exercise the rights of access, rectification, cancellation and opposition recognized in Regulation (EU) 2016/679 (General Data Protection Regulation), to be addressed to the Pasqual Maragall Foundation and Barcelonaβeta Brain Research Center: Wellington Street 30, 08005 Barcelona.