MÉDICO-TECHNIQUES

PhD Student

PhD Student position in machine learning for large-scale clinical radiology MRI data.

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<tr>
<th>Département</th>
<th>Dpt de radiologie médicale (DRM)</th>
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<tr>
<td>Code emploi</td>
<td>Assistant Uni 1e An. – 1101</td>
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<td>Niveau</td>
<td>Hors DECOFO</td>
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<td>Date d'entrée souhaitée</td>
<td>01-10-2018</td>
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<td>Type de contrat</td>
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<td>Catégorie professionnelle</td>
<td>Médico-techniques</td>
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<td>Lieu</td>
<td>Lausanne</td>
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<td>Taux d'activité</td>
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<td>Date de début de publication</td>
<td>07-09-2018</td>
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<td>Date de fin de postulation</td>
<td>30-09-2018</td>
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<td>Documents</td>
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Contexte
The Lausanne University Hospital (CHUV) is one of the 5 Swiss University Hospitals. Thanks to its collaboration with the Faculty of biology and medicine of the University of Lausanne and the EPFL, the CHUV plays a leading role in the domains of the medical care, the medical research and the training.

The SiemensHealthcare Advanced Clinical Imaging Technology group at the EPFL Innovation Park in Lausanne is a joint effort between the Radiology Department of the CHUV and Siemens. The goal of the group is to translate magnetic resonance imaging research into clinical routine, with a main focus on method development towards better clinical decision support. To this end, experts on MR image acquisition and image processing are closely working together in a constant exchange with medical doctors, enabling research and development which is clinically relevant. New ideas and developments can also directly be distributed through an international collaboration network.

**Mission**

With increased resolution and new acquisition sequences, workloads in radiology are always increasing. In addition, radiologists regularly have to perform repetitive analysis tasks. By leveraging under-exploited PACS image datasets and corresponding electronic health records, we will develop novel machine learning methods that will enable specific applications in radiology and help focus human attention where it is needed. While aiming at improving the clinical workflow, significant research and methodological work will be conducted to solve these challenges with new image processing and both shallow and deep machine learning-based approaches.

The candidate will be expected to develop and implement new algorithms, present work at conferences and in publications, and collaborate with local and international researchers.

**Profil**

Requirements:

- Master’s degree in electrical engineering, computer science, statistics, or related field
- Good training in linear algebra, calculus, statistics
- Good knowledge of Python, R, C++, or Matlab
- English proficiency, French knowledge an asset (health records are in French)
- Previous experience in machine learning, medical imaging, signal processing, natural language processing, and statistics are an advantage
- You will be embedded in a team of scientists which requires a strong team spirit
- The work in our team and with the clinical partners require excellent communication skills
- This PhD project will require creative spirit and the ability to work autonomously.

Nous offrons

If you become an employee at the Centre Hospitalier Universitaire Vaudois, we will offer you followings:

- High social benefits
- Three days of training per year
- 25 working days of vacation per year
- Very good staff restaurants with preferential rates
- A multidisciplinary project between cutting-edge brain imaging and advanced image processing in a clinical context
- An extremely stimulating field of research within a highly specialized and qualified scientific environment
- A work environment with state-of-the-art technologies.

Contact et envoi de candidature

Applications should be submitted by our electronic form only (please click the button "postuler" at the bottom of this vacancy announcement). If for technical reasons you are unable to apply online, please contact the recruitment team 021 314 85 70.

Soumettre ma candidature