Offre Emploi Postdoc Informatique Chaire E2S OpenCEMS

Du 20 janvier 2022 au 31 janvier 2022

Context and main purpose:

The Connected Environment & Distributed Energy Data Management Solutions (OpenCEMS) industrial chair addresses the issues that businesses and communities encounter when handling data management in their distributed energy and connected environments. The OpenCEMS research group aims at designing, implementing and deploying software solutions within Small and Large Scale Distributed/Connected Environments for better data collection/aggregation, information retrieval, and knowledge extraction. To achieve its objectives, OpenCEMS is developing an open framework capable of scaling and optimizing power grid operations.

Description of the postdoc activities:

* This postdoctoral fellowship’s global objective is to design and develop a Data Privacy technique based on Differential Privacy and its extensions to provide a trade-off between the utility and the privacy of personal data. The technique should consider four aspects: (i) the interactive approach (protecting the results of queries applied on the data) and non-interactive (creating and sharing an anonymized version of the data); (ii) applying the technique on centralized and decentralized systems (the existence and non-existence of centralized authority in the system that takes decisions regarding the data privacy); (iii) having the potential to deal with both correlated and independent data, (iv) and vast types of data as numerical, categorical, graphs, tuples, images, etc.
* The postdoc activities also target the interaction between the data owner and the technique. This entails providing a dashboard: (i) to test and choose the privacy parameters to provide the best balance between privacy and utility; (ii) to detect the existence of correlation among the data; (iii) to test the technique against several known attacks.
* The postdoc is required to provide support to ongoing PhD student projects, and activities that evolve around the same research area.
* The postdoc will be also involved in small load teaching activities related to Computer Science subjects.
Requirements:

* The candidate should hold a PhD in Computer Science. His/her work should be related to data privacy, probability theory and graph theory.
* Proven experience in Differential Privacy technique, data science, privacy mechanisms and probability density functions.
* Excellent scripting and coding skills.
* Excellent Communication skills
* Autonomous and team working capabilities.

* The postdoc will have the opportunity to work in a research group that gathers academic, and industrial partners. This environment allows the postdoc to participate in research gatherings, conferences, and visiting/working in different environments (e.g., in a research lab, partner institutions, and companies).
* Contract duration: 12 months (with a contract extension possibility).
* Gross Salary: 2300-2600 euros/month (depending on the candidate’s profile)
* Main host institution: LIUPPA/OpenCEMS research group.

Please send your applications (in PDF format) to the following contacts: richard.chbeir@univ-pau.fr

The application (written in English) should include:

* A Curriculum Vitae (including your contact address, work experience, publications, software repositories)
* A cover letter
* Two recommendation letters
* Two of your best publications/ implementations

Deadline for applications: January 25th 2022.

Start date: March 1st, 2022 (negotiable).