

## ***PostDoc position in Learning Analytics for Higher Education***

***Université de Lorraine, France***

### **Context**

The always broader usage of digital tools in all educational sectors leads to large or even very large sets of digital user-generated traces, collected via online pedagogical platforms, academic enrolment, libraries information systems, online assessment, social networks, etc. Simultaneously, “big data”, data mining, machine learning and Analytics technologies allow the exploitation and mining of increasingly large datasets. As a result, a new field of research, called Learning Analytics, has recently emerged. Learning Analytics is defined as “the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs” (Long & Siemens, 2011)<sup>1</sup>.

The Université de Lorraine is involved in a big national project about digital transformation of higher education: the PIA 2 DUNE EOLE project<sup>2</sup>. One action of this project is dedicated to the development and deployment of Learning Analytics tools within the university.

### **The position**

A postdoctoral position is offered in order to scientifically explore research questions related to these Learning Analytics tools, to manage the transition of students from secondary to tertiary studies, and to increase engagement and motivation of learners. The postdoctoral student will be in charge of designing new Machine Learning based models and to implement Learning Analytics tools. He will contribute to the progress of the technology, considering the expected application needs and performance. A specific attention will be put on the transparency of the algorithms.

### **Requirements**

The candidate should hold a PhD in Computer science, Artificial Intelligence, Data Science or Educational Sciences, with strong capabilities in computer science and data modelling.

The successful applicant should have a strong record in statistical machine learning and/or data mining. He should also have experience in a programming language and in one popular platform in the field, so as to design, develop and make the prototype evolve.

Solid background and skills:

- statistical machine learning, data mining, Java, R,
- able to work in a collaborative and multidisciplinary group, scientifically curious, rigorous, creative and able to develop an own research agenda,
- a first experience in Learning Analytics will be appreciated.

Duration: 22 months contract, starting in January 2018

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<sup>1</sup> "Penetrating the Fog: Analytics in Learning and Education", by Phil Long and George Siemens September/October 2011 EDUCAUSE review, available at the address <https://net.educause.edu/ir/library/pdf/erm1151.pdf>

<sup>2</sup> [www.agence-nationale-recherche.fr/ProjetIA-16-DUNE-0001](http://www.agence-nationale-recherche.fr/ProjetIA-16-DUNE-0001)