

HEC Liège is looking for a PhD Researcher in Data Science (M/F) (ref. HEC-DL2109)

The **HEC Digital Lab**¹ is the transdisciplinary platform within HEC Liège, spearheading research and education in Digital Technologies. As part of its expansion, it is now looking for a PhD researcher for an exciting, innovative research project on:

Customer Profiling using Machine (Deep) Learning and Belief Functions

The project is sponsored by a leading organization operating in the finance and insurance sector. Thus, it will provide a unique opportunity to the selected candidate to conduct high-impact, relevant research, while acquiring practical knowledge within a business setting.

A brief project description is given below. However, the specific research topics will be refined once the candidate has been selected.

PROJECT DESCRIPTION

Our overarching aim is to acquire deeper insights on the customer journey. Specifically, we seek to create models of customer behavior, focusing on loyalty and propensity to churn. Some of the key questions to be addressed include:

- Estimating the propensity of customers to churn.
- Identifying early factors/weak signals indicative of churn.
- Estimating the time-lapse for a customer to churn.
- Determining preferences of customers, both loyal and those likely to churn.
- Determining the “next best action” and recommending products to these customers.

We plan to address these questions by investigating the novel combination of **Belief Functions** and **Machine (Deep) learning** methods.

¹ Visit us on <https://www.digitallab.be/en/>

JOB DESCRIPTION

If selected, you will have the opportunity to:

- Be part of a leading and dynamic business school, located at the heart of Europe;
- Attend a world-class doctoral training program at various Universities in Belgium and also overseas in Summer Schools;
- Be exposed to a real-world business setting and regularly interact with a young, promising data scientist team;
- Work full-time on ground-breaking research as there is no teaching load;
- Represent HEC Liege at international scientific conferences.

YOUR PROFILE

- You have a strong Master's degree in a field relevant to the project (computer science/engineering, mathematics, statistics, or other related disciplines);
- You have a good understanding and practical experience with state-of-the-art methods in machine (deep) learning;
- You are willing to regularly disseminate and publish research results;
- You have very good English written/spoken communication skills.

CONTRACT & SALARY

This is a full-time position for four years. The salary will be set according to the doctoral researcher salary scale of the University of Liège under grant holder status (i.e., approximately 2.100 € net per month, fixed over the entire period). **The candidate will start as soon as possible, and at the latest in January 2022.**

APPLICATION PACKAGE

The application should include the following elements:

- Cover letter showing your motivation and eligibility for the PhD position;
- CV showing your past experience and expertise in the PhD area;
- An example of your written academic work, if any;
- A copy of your undergraduate and postgraduate degrees;
- A recommendation letter, to be sent directly by the person recommending you.

IMPORTANT: This is an extension of a previous call on the same topic. There is **NO** need to apply again had you already done so in the past for the previous call.

Interested candidates should send their application (compressed folder) **by email** to Dr. Nicolas NEYSEN, Director HEC Digital Lab (nicolas.neysen@uliege.be) and to Prof. Ashwin ITTOO (ashwin.ittoo@uliege.be).

Applications should be received **before the 31st of October, 2021**.

Incomplete applications will be automatically rejected. Further information can be obtained by sending an email to Prof. Ashwin ITTOO.

ABOUT HEC LIEGE

HEC Liège² is the management school of the University of Liège. HEC Liège is one of the leading Belgian university business schools for graduate and postgraduate programs with more than 115 full-time faculty members and researchers and more than 2500 students. HEC Liège is a dynamic institution that heavily promotes an active pedagogy leading students to contribute actively to their own education. The international vision of HEC Liège translates into multiple research activities in management and economics, numerous partnerships with worldwide companies and universities, and growing internationalization of its programs and faculty.

HEC Liège is located in Liège, Belgium's third largest city, and the largest agglomeration of the French-speaking Walloon region. At the heart of Europe, Liège is the third inland port of Europe and the seventh freight airport in Europe. Recognized for its quality of life and its rich historical heritage, Liège is ideally situated within the Meuse-Rhin Euregio, 30 km from Maastricht (the Netherlands) and 60 km from Aachen (Germany). It is less than 1.5 hours away from Cologne, 2.5 hours from Paris and 4 hours from London by high-speed train (TGV) starting from the new magnificent train station designed by the renowned architect Santiago Calatrava.

² Visit us on <http://www.hec.uliege.be/en/home>