HOCHSCHULE LUZERN

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"Are they allowed to do that?" – Profila and the Lucerne University of Applied Sciences and Arts (HSLU) are developing an "AI lawyer" for legal questions

Companies' data usage regulations often come across as something of a closed book. The intelligent digital assistant under development is designed to provide laypersons either with clear information (e.g. data protection) or with a flesh-and-blood lawyer. The HSLU is developing this "AI lawyer" with Profila, an international data privacy platform.

Maria and Daniel signed up for a supermarket chain's online delivery service and agreed to the company's data usage regulations – a long, hard-to-follow document. To their annoyance, they started receiving almost daily advertising from the supermarket chain as well as from its subsidiaries. "Are they allowed to do that?" ask Maria and Daniel.

Maria, Daniel and the newsletter are, of course, fictitious. But most people can relate to this scenario taken from everyday life. "Consumers often do not know what companies are allowed to do with their data and how to defend themselves against the unwanted use of this data," says lawyer Michiel Van Roey, co-founder of Profila, an international platform specialising in data privacy, consumer engagement and marketing.

The HSLU and Profila are working on a joint project aimed at changing this: the researchers want to provide Maria and Daniel with a kind of "AI lawyer" that will provide them with expert advice. This lawyer comes as a chatbot app for smartphones, comparable to digital assistants such as Siri or Alexa.

The chatbot will provide users with information, in the form of simple Q&As, about how companies use their data. It can also help people manage their data: "Consumers ought to be able to decide for themselves who has access to their personal data and what it is used for," says Michiel Van Roey. In Maria and Daniel's case, this means whether a subsidiary of the supermarket chain is allowed to send them advertising.

"Legal answers must be precise"

Behind the "AI lawyer" is an intelligent database developed at the HSLU. Alexander Denzler's research team from the HSLU's School of Information Technology is "feeding" the database's algorithm with almost one million documents, ranging from legal cases, court rulings and data usage guidelines issued by authorities and associations to companies' general terms and conditions of business. The more data the system has at its disposal, the better it learns to respond to specific cases, explains Denzler.

Speech recognition represents a particular challenge for IT researchers. This is because most users are not familiar with the legal terminology. "Nevertheless, our artificial intelligence must be able to understand the legal issues behind a question," says Denzler. "When it comes to legal questions, the answers have to be precise."

To ensure that the "AI lawyer" works as intended by giving appropriate answers, Profila's lawyers are putting the database through its paces using test questions. An initial version capable of understanding and answering questions should launch in summer 2022. The more the program is used, the more new cases, and thus new data, it will be able to leverage.

Humans ready to step in

Alexander Denzler stresses that there will always be situations in which the "AI lawyer" is unable to provide an appropriate answer, either because the questions are too specific or because they have never been asked before. In other words, there is a lack of reference data.

If this happens, the chatbot will present the user with a list of lawyers from the relevant discipline, able to provide a prompt answer for a fee of around CHF 10 per question. The legal professionals' expertise is determined on the basis of their CV and previous activities in the app.

Project financed by the Swiss federal government

Once the intelligent database is ready, the research team will start building a network of legal experts willing to participate in the Profila app. The aim is to complete the project by 2023. The initial version of the app will understand questions in German only. If it proves successful, Alexander Denzler and Michiel van Roey hope to develop versions in other languages.

The Swiss federal government's Innosuisse innovation agency is funding the two-year project to the tune of CHF 550,000. The total project budget comes to CHF 950,000.

AI research at the HSLU

Applied research into artificial intelligence is a focal point at the HSLU School of Information Technology. A brief overview of current and completed projects:

- Healthy skin: researchers at the HSLU and University Hospital Basel have developed an AI dermatology model that helps identify skin diseases and determine their severity. <u>Further information</u>
- **Tasty biscuits:** AI, biscuits and culinary skills: cookbook publisher Betty Bossi and HSLU researchers have created the first "intelligent" biscuit recipes for consumers to try at home. Further information
- Quaffable beer: Deeper, Switzerland's first AI-based beer, is the joint effort of a research team from the HSLU and Central Swiss companies Jaywalker Digital and MNBrew. <u>Further</u> <u>information</u>

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