Algorithms and Law – A course on Legal Tech

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The seminar discusses computational methods in the legal profession. The use of advanced technology in legal practice (Legal Tech) is currently taking off, both in Switzerland and in the rest of the world, a development that is also mirrored in related and sometimes overlapping fields (financial industry: FinTech, insurance industry: InsureTech, regulation: RegTech, etc.). Many tasks are automated and commoditized, while a new ecosystem of law firms, tech entrepreneurs, academics and other professionals is emerging. It is therefore of importance that prospective lawyers develop some knowledge of the different tools used in the industry as well as their underlying algorithms.

An algorithm can be defined as a set of rules that precisely defines a sequence of operations. The course thus introduces the participants to the sets of algorithms used for various purposes such as developing prediction models or legal expert systems. The subject of computational law can roughly be divided into two sub-fields: data-driven and rule-based approaches, both being used for various applications and in diverse contexts, not least due to the differences between common law and civil law systems.

In the data driven approach, statistical methods are used to e.g. predict certain outcomes (such as court decisions), process natural language, visualize law, or analyze networks. The course will discuss how such predictions are made and how an algorithm can make recommendations (e.g. on whether to go to trial). It will also showcase examples where machine-learning tools have been used to visually represent connections between cases and statutes (e.g. through citation analysis).

Apart from statistical analyses, Legal Tech also endeavors to translate legal rules into machine-readable statements. The course will thus discuss how fields of law can be represented as decision trees (flowcharts), an important step towards machine executable legal code.

Furthermore, the course will introduce and explore the use of decentralized ledgers (blockchains) and smart contracts, technologies that allow for transactions without the need of a trusted and central authority.

Finally, the regulatory environment for Legal Tech will be discussed, as the cooperation between lawyers and IT expert creates legal issues of professional regulation.

The seminar will devote ample space to discuss the potential opportunities, but also the possible issues than come with disruptive technological change. Its perspective is deliberately international by following the developments around the world, while putting an emphasis on possible applications in Switzerland.

Prerequisites and target audience

Prior technological or statistical knowledge is not necessary to successfully participate. The course is open to law students at different stages in their studies, although at least three semesters of study need to have been completed. Students from other disciplines are very welcome to join.

Learning Outcomes

- The participants can structure legal provisions as decision trees
- They can identify the main quantitative methods used in data-driven legal analysis
- They know the main features of technological tools available to today's lawyers
- Participants will have improved their academic and professional skills, such as:
    - Conducting legal research, retrieving information from a range of data sources and including interpretation of textual and numerical data
    - Interpreting a set of facts in order to identify legal issues arising, providing reasoned arguments and conclusions
    - Constructing a coherent argument in response to oral or written stimuli, and presenting it in front of colleagues
    - Reflecting on one's own learning, responding appropriately to formative testing and feedback

Logistics

The seminar will take place on Thursdays from 12.15-13.45, starting on February 22nd. 2018.

Attendance is mandatory. The location will be announced at a later stage.

Assessment

Active participation by all participants is essential to this seminar. Small tasks will be given during the semester. Participants are asked to give a presentation, and to produce written pieces of work.

The course language is English.

To register (or for any inquiries), please send an email with a brief description of your background to philip.hanke@oefre.unibe.ch before January 22nd, 2018. Participation is limited to 20 students.